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ABSTRACT

This special report is designed to help school personnel prepare for the estimated five million youngsters to be enrolled in preschool programs by 1975. It includes a review of the new philosophies and old controversies of early childhood education, research results from private and public sources, a guide to federal funding policy and clues to the ferment in state and local communities. As an aid to those seeking to set up programs of their own, descriptions of various projects that have demonstrated success in increasing the achievement of young children are presented. The pamphlet concludes with a listing of sources from which additional information about major trends in preschool education may be obtained. (Author/WY)

## This Is an Education U.S.A. Special Report

*Education U.S.A.*, a weekly newsletter founded in 1958, has introduced new dimensions to educational journalism in the United States. In addition to the newsletter, which reports major developments in preschool to graduate level education, the editors of *Education U.S.A.* prepare special in-depth reports on current education issues and problems.

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The special reports are prepared when the editors decide that a new development in education is important enough to be covered in detail. *Preschool Breakthrough* is the 20th report in this series.

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# PRESCHOOL BREAKTHROUGH

## What Works in Early Childhood Education

### PRESCHOOL BECOMES A NATIONAL CONCERN

The tremendous potential of preschool education is finally being recognized by both educators and political leaders. As a result, the Nixon Administration is trying to identify itself with new emphasis on the preschool child. Congress has also become interested. And so is big business, which sees the accelerating preschool movement as a possible financial bonanza.

The ascendancy of preschool education as a national concern began in the 1960's, propelled by a truly stunning research finding--that the best years of a child's learning life occur before the age of 6.

The discovery that the child's intelligence grows as much during the first four years of life as it will grow in the next 13 spurred the antipoverty fighters. Supporting early childhood education, they argued, would be the most promising way to attack educational deficiencies among the poor.

Thus, the 1960's witnessed a formidable array of federal programs geared to serve and study disadvantaged children. Head Start, and Titles I, III, VIA, and VII of the Elementary and Secondary Education Act (ESEA) were the "action" fronts, while in the research corner stood the National Laboratory for Early Childhood Education with its network of seven university-based centers, and the Regional Education Laboratories supported by the U.S. Office of Education's National Center for Educational Research and Development.

President Nixon endorsed the move for preschool education in 1969. Introducing his welfare reform bill, he told Congress: "This Administration is committed to a new emphasis on child development in the first five years of life." Later in a 1970 message on educational reform, he called for an Early Learning Program to create a network of experimental centers designed to probe "what works best" in early childhood education.

Other politicians in both parties were casting benevolent eyes toward the young preschoolers. The President had proposed day care and educational services for 450,000 children of working welfare mothers, but Rep. John Brademas (D-Ind.) trumped that with his Comprehensive Preschool Education and Child Day

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Care Act to authorize preschool programs for all children, not just the disadvantaged. And Sen. Russell Long (D-La.) unveiled his plan for an ambitious Federal Child Care Corporation to meet "an almost universal need" for child care services.

Meantime, similar concern for preschoolers was being expressed in state-house corridors. Early in 1970, the Education Commission of the States (ECS) predicted that in the near future, there would be an "unusual" rash of state legislation geared to meet the needs of the youngest Americans.

The growing ferment did not escape those segments of industry which keep an antenna tuned to educational vibrations. Already, several new industry-operated day care plus education ventures have made their debut on the national scene, accompanied by considerable fanfare. One new wrinkle is the entrance of the franchiser, proposing to sell day care services like fried chicken or root beer. Some astute observers predicted that preschool education would become a flourishing new industry.

The biggest national experiment in early education so far has been a "classroom" in which all of the nation's 12 million 3- to 5-year-olds can participate. It's "Sesame Street," educational television's massive attempt to use sophisticated TV programming to teach the alphabet, numbers, how to count, simple reasoning, vocabulary, and a "sense of self" to the very young. In its first season, Sesame Street won the hearts of its pint-sized audiences and the plaudits of sober-sided educators who claimed that it really was reaching and teaching the tots.

Early childhood education has won support from other powerful segments of American society.

Pushing it are such groups as the National Education Assn. and the Committee for Economic Development; the American Federation of Teachers and the National Congress of Parents and Teachers; the Women's Liberation Movement and the Welfare Mothers; and many, many others.

It all adds up to two big questions for the public schools: what part should they play in serving this vast new constituency of "under-5's," and how should they gear up the "regular" school curriculum and organization to serve a growing influx of youngsters who have been exposed to two, three, or more years of preschool education?

This report is designed to help school personnel to prepare for the mass of preschoolers headed their way. It includes a review of the new philosophies and old controversies of early childhood education and the sometimes surprising research results seeping out of the private and public ivory towers; a guide to and through the federal apparatus which has already sparked many innovative techniques; clues to the ferment in state and local communities, and, as an aid to those seeking to set up programs of their own, detailed descriptions of various projects that have been proved to "really work" in increasing the achievement of young children.

## THINKERS, THEORIES, AND TRENDS

Although they don't know it, the 4 million youngsters now enrolled in some type of early schooling--and the estimated 5 million who will join them by 1975--are having their learning lives revolutionized by a cadre of distinguished scholars who use the nursery as a laboratory.

Among these are psychologist Benjamin Bloom of the U. of Chicago who hypothesized that since the child develops about 50% of his mature intelligence by age 4, these early years are the time to change his environment for maximum learning gains. As time goes on, more and more powerful forces are required to produce a given amount of change in the child's intelligence, say his followers, if indeed change can be produced at all.

Other influential scholars include Richard Crutchfield of the U. of California and Jerome Bruner of Harvard U. with their continuing research into cognitive processes; J. McVicker Hunt of the U. of Illinois who resolved the issue of a fixed IQ with evidence that environment can count for as much as 40 IQ points in a person's intellectual development; and Swiss psychologist Jean Piaget. Piaget was first to describe the stages through which young children develop their mental model of the world. How well and how rapidly this model is built depends largely on the child's environment, said Piaget. The more the child has seen and heard, the more he wants to see and hear; the greater variety of things he has coped with, the greater the child's capacity for coping.

Although the theories of Piaget and the other "growth scientists" are being tested and used in private, laboratory, and experimental schools and in special projects, some teachers, administrators, and parents still debate an old argument--should early education develop social skills or intellectual ones?

For more than a generation, much preschool education has been based on the supposition that the psyche of little children could be harmed if systematic attempts were made to help them learn. The child was considered mainly a social being who suddenly acquired cognitive development at age 6.

A Carnegie Corp. officer illustrates this widespread theory with an anecdote about his effort in the early 60's to locate materials that encouraged the intellectual development of young children. He sought help from the Assn. for Childhood Education (ACE). An ACE official was able to find exactly one reference on the subject. He commented that the authors of that book

were "astonished" to find out that children "learn vicariously as well as by experience...." And as late as 1963, a New York Times education writer reported few efforts to teach children to read before the age of 6. "Opposition to early reading is violent among many professional associations and educators," he reported.

Although some researchers have swung the pendulum completely to the other side (for example, Omar K. Moore with his "controlled" problem solving environment where 2-year-olds learn to read and write on electric typewriters), the philosophical balance appears to be settling in the middle.

Early Childhood Education Today, a report prepared by the Assn. for Supervision and Curriculum Development (ASCD) that represents the professional educator's stance, identifies the range of positions in the argument over intellectual versus social development:

...There are those who propose that much that has been taught at a later period of life can and ought to be learned in the early years, at least under certain specified conditions. From this position come programs for early reading, as well as programs that bear greater resemblance to those of later elementary or early secondary years than to the "traditional" nursery school or kindergarten.

At the other extreme, ASCD goes on, are those early childhood educators who are "generally opposed to organizing school programs for specific learnings and who support the notion that young children should learn only those things for which they have a particular bent."

ASCD concludes that most educators of young children are taking positions "somewhere between these two extremes, using the interests and motivating forces within children, but intervening in the child's activities in a variety of ways to facilitate learning."

## Two Imported Approaches

Differences in theory show up in two different "imported" approaches to educating young children which have excited interest in this country--England's "integrated day" or "free school" plan and the Montessori schools. England's plan grew out of experience with British Infant Schools, in which there are no class lessons. Instead, the individual child chooses his own learning experiences from a wide array of materials and activities. The teacher in the "free school" eschews a "chalk and talk" role, but is always around observing, stimulating, assisting the child, and keeping detailed records of his progress. The Institute for the Development of Educational Activities (I/D/E/A) sponsored a seminar in Oxford, England, for American educators to explore the plan. It notes in a report that in the typical English school, "several activities such as reading, writing, painting, and playing music are all going on simultaneously. Hallways--traditionally long, empty echo chambers in America--are filled with children working on various displays or even using play money to shop in a play store. This informal learning spills onto the playground where students may be clocking a tortoise's speed or painting with water colors."

The I/D/E/A report concludes that in many cases, the children teach each other or are taught by older students, and because learning is informal, teachers have to keep detailed accounts of how the students are progressing. These records, says I/D/E/A, make the traditional American report card "as obsolete as a buggy whip."

Materials--and constant opportunity to use them--are basic to the "integrated day," but they are not static. Teachers in England reported that some of their most creative resources came from impromptu trips to lumber yards or junk shops.

Not so with Montessori education, designed to encourage self-motivation of very young children with a prepared environment and cognitive materials that have been developed for specific stages of growth. Although not associated with any particular religion, the Montessori plan is quite popular with Catholic parents. It was begun more than 50 years ago by Maria Montessori, an Italian physician who used the classroom as a laboratory for observing children, working her theories into practice by designing materials and learning experiences that challenged the children.

Basic to Montessori education is the belief that the child "possesses unusual sensitivity and mental powers for absorbing and learning from his environment that are unlike those of the adult both in quality and capacity." Since the first six years of life are especially important, most Montessori plans concentrate on the years between 3 and 6. Dr. Montessori's experiments were first conducted with retarded children and those living in the slums of San Lorenzo, Italy, which accounts for some of the current interest in using Montessori with compensatory education programs in this country.

The Montessori plan was introduced in the United States in 1912, but enthusiasm for it petered out because of the lack of trained teachers and the shift of emphasis "from development of intellectual skills to life adjustment," according to the American Montessori Society. It was reintroduced in 1953 by Nancy McCormick Rambusch, and the Society claims that there are 600 Montessori schools in the United States. A Montessori classroom requires about \$800 expenditure for special equipment at the preschool level and teachers who have received at least a year's special training in Montessori methods. (There are now more than 700 Montessori teachers in the United States.)

Montessori, its backers claim, can serve children from all kinds of backgrounds and with divergent capabilities. The child works in a nongraded class, using materials that are self-educative. He is free to pursue what interests him so long as he does not disturb other children or abuse the equipment. The teacher is a guide, introducing new materials and experiences when she feels the child is ready for them. The teacher prepares the environment, but children move themselves toward learning. Freedom to learn, according to Montessori, comes from an "inner discipline."

As with other early education theories, Montessori is under constant comparative study. Urban Fleege, professor of child psychology at DePaul U. in Chicago, and a lecturer at the Midwest Montessori Teacher Training Center, makes these claims in a U.S. Office of Education research study:

Ninety-four percent of Montessori-trained children 5 to 5½ years old were ready to enter first grade as compared with only 50% of this age group in the control group enrolled in a non-Montessori preschool. The comparable percentages for reading readiness were 67 and 30%, respectively.... Children in the public and parochial primary grades who had attended Montessori preschool were found to be superior, at a statistically significant level, to their peers who had attended preschools other than Montessori, in interpersonal relations, in learning ability, and in interest in learning. No significant differences were found, however, between the groups in creativity....

### **Peering over the Crib**

Perhaps the idea destined to lift the most eyebrows in the early education field is the proposal to "teach" the diaper set. Yet, cribside education is being seriously advocated in many quarters as perhaps the only lasting answer for the babies of the poor.

Professor Jerome Kagan of Harvard U's Dept. of Social Relations has studied differences in the development of young children from different social classes and has become convinced that in many cases, slum homes can actually be considered "crippling"--at least in preparing their young for life in modern American society.

In his tests on 180 white babies beginning at the age of 4 months, Kagan found class differences emerging clearly by 12 months of age, and showing up even earlier for girls--in some cases as early as 8 months. The differences, he says, appear in every one of the basic skills the child learns in his first three years. Middle class youngsters, for example, learn specific "schema" for events around them, and by age 1 are way ahead of poorer children in discriminating between similar stimuli. Kagan reasons that the middle-class youngsters have greater experience with "distinctive" stimulation--slight transformations or discrepancies from what is ordinary.

"Middle-class mothers seem unconsciously to try to surprise their infants," Kagan says, "and that's very good! They play peek-a-boo or make unexpected sounds. In slum areas, mothers don't do this--they don't think of it, or may not have time. But it's important."

### **New Institution Sought**

Citing the fear that inner-city children have of their environment, Mrs. Elizabeth Gilkeson of Bank Street College, New York, has proposed infants' schools for children from birth through age 7 or 8: "I am absolutely convinced that we need a new educational institution which begins at birth." Children of the urban poor, she says, live in a "scary" environment of isolation which requires development of a whole new milieu in which to learn to think.

Also he says middle-class mothers spend more time talking, smiling, and playing with their babies, and this leads directly to differences in the quality of language between the poor and the affluent.

Other scientists feel poverty-area mothers simply don't know how to stimulate their babies to learn but that they could be taught these skills. J. McVicker Hunt describes how infants in a Durham, N.C., ghetto actually benefitted from a research program aimed only at studying their psychological development, not interfering in it. After two years of tests at a Duke U. laboratory once a month, these toddlers scored close to 110 on the Binet IQ test while other 2½-year-olds from their neighborhood scored only 70 to 80. Hunt thinks that the babies' mothers who were present throughout the tests must have noticed those items they did well on, and those on which they didn't, and subsequently gave them "practice" where they needed it. Like many other growth scientists, Hunt believes that poverty-area mothers could be trained to become the "best--and least expensive--teachers of the young."

This belief forms the rationale behind the federal government's new program of Parent and Child Centers (PCC), operated under the aegis of the Office of Child Development (OCD). Growing out of the widespread feeling that Head Start comes too late in a deprived child's life, the Centers, located in 36 urban and rural communities (with one each for migrants and Indians), are designed to help parents before and after their children are born. They also provide comprehensive health, educational, and social services not just to infants and toddlers but to mothers, fathers, older brothers and sisters, and grandparents.

First task of the Centers is to direct and coordinate existing health and welfare services for the families. (Each Center handles about 65 families, averaging 100 children to a Center.) If the services do not already exist in the community, then the Center can provide them. Second priority of the Centers is education--intellectual stimulation--of the preschool children. In some Centers neighborhood residents are trained as tutors who visit the homes with toys and materials for the children and encourage parents to talk to their infants. In others, the Centers, located in the poverty neighborhoods, become infant schools, and classes in general education, consumer education, and workshops for the fathers function alongside infant education programs.

A local university, which supplies evaluation, training, and research, is affiliated with each PCC. Each Center is limited to \$175,000 for year-round operation. One goal is to see if these services to poor families can be offered at a minimum expenditure. Twenty-nine of the PCC's are under the supervision of Head Start; seven others, which emphasize parent education, are directed by the Office of Economic Opportunity (OEO). Although the Head Start office has received more than 200 requests for additional PCC's, no expansion is planned at least through fiscal year 1971 because of the lack of funds.

Mrs. Franc Balzar, director of the programs under Head Start, sees definite results of the Center program after only one year of full operation: "We already have learned that if you help parents with parenting, family life will improve considerably. Parents want to do better." Infant stimu-

lation works, she told Education U.S.A. "In fact, the gains have been so great we are surprised ourselves." Other positive results are the increased community awareness on the part of parents and the upgrading of the Head Start curriculum.

Techniques used at the Parent and Child Center in Mount Carmel, Ill., are probably typical, although individual Centers are permitted freedom to develop their own methods as they seem effective.

The children, beginning at 18 months of age, are brought to the Center at 9 a.m. daily by a shuttle service operated by staff and mothers. They stay for two hours of supervised play and instruction. The teachers, along with mothers who serve as aides, help the child, for example, to get a sense of "feel" by fondling various objects as the adult describes them. Also used is a "smell box" containing jars of different odorous items like vinegar.

Each infant receives a turn before a mirror where a teacher attempts to engage him in a game of identification of eyes, ears, nose, and so on. The teachers also help the infant to play with educational toys--to place hoops on a peg or to pull a rope on a crib toy that then makes a ringing sound.

Mothers are learning, too, through all this, and, in addition, Mount Carmel staff members visit their homes to teach mothers other techniques for stimulating the babies.

Other current experimental studies with the very young--up to 3 years of age--sponsored by OCD and other federal agencies include these:

- The Yale Child Study Center will follow about 75 children from early infancy to 7 years of age. It will provide advice and casework treatment for parents and foster parents, design group residential care and a program of educationally oriented day care, and compare the progress of three groups of children--in families, in residential care, and in day care programs.
- The Harlem Research Center involves a group of 310 children from age 2 through the first grade, providing them with eight months of individual work, play, and conversation with an instructor on a one-to-one basis. The experimental group has performed better than others on a variety of tests and maintained that superiority. Some early conclusions: the 2-year-old is highly capable of learning a great deal with only two hours of instruction; and what he is taught is not as important as the nature of the adult-child relationship.
- The U. of Florida is using women from disadvantaged neighborhoods to teach mothers of infants and young children how to stimulate their children's development. The children in the experimental program already show significant gains in intelligence, hearing and speech, eye and hand coordination, and personal-social relationships over children not in the experiment.
- The Frank Porter Graham Child Development Center at the U. of North Carolina is conducting a long range project to devise an "optimum"

environment for a group of infants and children who vary in race, sex, and socioeconomic background. The project will support parents' efforts by developing a package of services for children, including full day, health, and education assistance; and will attempt to discover what difference such a program will make in the long range stability of the families and the development of the children.

- Eight Southern states are participating in a large-scale day care program for preschool and other young children launched this year. The three-year demonstration will test day care for infants, after-school and summer care, use of mobile facilities, and nighttime care. At a cost of \$750,000 each year, it will be administered by the William H. Donner Foundation and the Southern Regional Education Board.

Esther Edwards, associate professor of the Eliot Pearson Dept. of Child Study at Tufts U., typifies the growing number of believers in infant education with her unequivocal declaration that educational stimulation, beginning at the age of 19 months, must "be the rule" for children of deprived inner-city or poor rural families. "Whether tutors should go into the homes, whether children should be brought into carefully planned educational, as distinct from babysitting day care situations, we do not know," she says, but "the experiments now going on should help us decide."

## **Big Business Makes the Scene**

Industry's current effort to lure the sandbox set into schools it is setting up stems from two assumptions: (1) that those middle-class mothers who used to worry about getting their child into Harvard are now worrying about his "cognitive development" at age 3 and will constitute a surefire demand for expert help; and (2) that the day of large federal expenditures for day care is not far off.

Universal Education Corp., using as its theme: "If there's a 3-year-old in your family, you've got a genius on your hands," has set up what it calls "Discovery Centers" in several Northeast cities and suburbs for children age 3 to 6. It plans to open 340 such centers in the next three years. The Corporation says it has invested \$3 million in researching and developing its educational program, which utilizes specially designed toys, books, and art materials, as well as record players, tape-cassette machines, videotape recorders, TV cameras, and microphones (with which children can produce their own TV programs).

A child spends two hours a week in the Center "discovering" new insights in a colorful educational atmosphere. Each child is constantly evaluated by a trained staff which prepares detailed reports for his parents. Educational toys and other materials go home with the child along with specific instructions to parents as to how to put them to best use. Parents pay anywhere from \$33 to \$45 a month--a price tag which obviously puts the Discovery Center out of bounds for the poor child who needs it most.

Corporation executives hope to interest the Dept. of Health, Education, and Welfare in a federal program which would underwrite enrollment of children

from low-income families, and it also intends to offer "scholarship" aid to deserving parents who could not otherwise afford to send their children to such centers.

Providing such supplementary services for tiny tots of the middle class could conceivably be considered a "frill," but nobody doubts the need for more high quality day care centers in this country.

No public or private agency so far has gathered reliable statistics on how many children participate in day care programs. It is known, however, that there are approximately 5 million preschool children whose mothers work full or part time, compared to 3.8 million in 1965.

According to the Day Care and Child Development Council of America, Inc., there are fewer than one-half million places in licensed day care centers across the country. In addition, the Council maintains that the estimated 5.5 million children from disadvantaged homes need the health, educational, and social services of a full-day program.

These statistics have fallen on receptive ears in Congress. The Brademas Comprehensive Preschool Education and Child Day Care Act would provide operating funds for child development programs, support for the construction and renovation of early childhood facilities, and money for research, demonstration, and training programs. In the Senate, Louisiana's Russell Long says the country needs a "new mechanism" to solve the child care shortage. His proposed mechanism--a Federal Child Care Corporation--would be initially funded with a loan of \$500 million from the Treasury Dept. to be placed in a revolving fund. At first, the corporation would contract with existing public, nonprofit private, or proprietary facilities providing child care services, and others who wanted to set up such services, offering them technical assistance and advice. In addition, the corporation itself would have its own facilities.

Long explains that fees would be charged and these would go into the revolving fund. The fees would have to be reasonable enough, he says, so parents could afford them, but high enough to cover the corporation's costs in arranging for the care.

He sees the corporation providing a wide variety of services to parents: nursery schools and kindergartens to provide intensive educational experience, other facilities which would balance education with recreation, home settings for small groups of children, day camps and summer camps, temporary or "drop-in" child care for short periods of time while the parent shops or takes courses, at-home child care and babysitting, boarding facilities, and night care. He maintains that in the long run, such a corporation "would not cost the taxpayers a penny."

Two other legislative developments concerning day care centers proved interesting to industry: amendments in 1967 to the Social Security Act called for the establishment of day care centers for the children of mothers who, according to this law, cannot qualify for welfare payments unless they take a job or receive job training; and amendments to the Labor-Management Relations Act in 1969 to permit employer contributions to trust funds to es-

tablish child care centers for preschool and school-age dependents of employees. Formerly only a handful of companies, principally Southern textile mills, had operated day care centers, but recently two Boston firms--Avco and KLH--have begun pioneering projects. A score of other companies appear to be on the verge of setting up their own centers or considering the possibilities.

The Administration is known to favor private initiative in the day care field, and warmly supported a 1970 study by the Office of Child Development of the various ventures springing up around the country, including that new phenomenon, the franchiser of day care.

Franchise concerns boasting such names as "We Sit Better," "Mary Moppet," and "Pied Piper" are booming. In some cases, purchasers of the franchise are told they can earn \$25,000 to \$50,000 annually. They are entitled to use the franchising company's name, instructional and educational programs, building plans, and staff aides. One company claims to have sold 68 franchises in Missouri and seven Southern states; another has 70 in the Midwest and 100 in the West. At present, all are aimed at the more affluent child but the franchisers are keeping an eye on possible federal help.

Some educators take a dim view of all this, reasoning that business is after a fast buck. Even the Day Care Council, which is anxious to promote more day care throughout the country, is dubious about commercially franchised centers. A Council official told Education U.S.A.: "We don't see how you can make a profit out of quality day care."

One franchiser, Vern Krehbiel, president of Day Care Centers of America, Inc., deplores on one hand the suspicious attitude of some educators toward business involvement in early education, and on the other, the all-too-obvious motivations of some entrepreneurs. The wheeling and dealing of the latter, he believes, could drive out firms like his own which, he says, is out to perform a needed social service along with making profit. He is lobbying for stricter state enforcement of laws governing franchising and full-scale investigation of suspect operations.

Krehbiel, whose present group of centers is concentrated in Texas and Arizona (he expects to have 1,000 eventually), is also aghast at estimates from government and other sources that a quality day care operation would cost \$2,000 per child. His own fees (\$19.50 per week per child) cover a specially developed curriculum for 2- to 5-year-olds, an attractive facility with quality control built into everything from the paint on the roof to the potato masher in the kitchen, extensive educational toys and tools, and care that extends from 6:30 a.m. to 6 p.m. with two daily snacks and lunch. He expects to exert strict control over the centers his firm franchises. For example, each center will be linked by closed circuit television so that its activities can be constantly monitored at the Scottsdale, Ariz., headquarters. He also is setting up a training and development center in Phoenix to prepare all teachers who will work in Day Care of America centers.

The pros and cons of various day care plans, business-run or otherwise, will have to be decided by HEW's Office of Child Development (OCD), which is only a year old itself. OCD has three bureaus. One, the Children's Bureau, will continue its research, demonstration, and training functions in the

child welfare field, as well as providing leadership for the Community Coordinated Day Care (4-C) program. This program has no funds for services, but can mobilize existing resources in a community. Coordination the 4-C way is carried to the top with the program given direction by a standing committee representing HEW and the Depts. of Labor, Defense, Agriculture, Interior; the Office of Economic Development; and the Bureau of the Budget.

A second Bureau of Head Start and Child Development has taken over from OEO responsibility for Head Start, as well as for the new Parent and Child Centers, preschool and day care activities of the Aid to Families with Dependent Children, Child Welfare Services, and the Work Incentive Program. The third is the Bureau of Program Development and Resources, which deals with all children's programs other than preschool and day care.

### **TV Hooks the Young on Learning**

Statisticians report that preschool children clock 4,000 hours in front of a television set before they start their formal education. After years of being deplored as the "boob tube," TV is coming into its own as an educator of the smallest Americans, with "Sesame Street" its biggest triumph so far.

Other programming is on the way. A program under development by the Appalachia Educational Laboratory, for example, couches small bits of learning in great amounts of TV entertainment, mostly cartoons. The idea is to entertain the little ones and teach them reading skills at the same time.

Through television, says Lynn Canady, coordinator of the program, the nonessentials of reading, such as learning to hold a book properly, turning pages, and left-to-right eye progression are stripped away. Words become as active on the screen as the cartoon characters who utter them, and the sounds and blends can be skillfully coordinated mechanically. The individual letters of the word appear on the screen and then dance together to blend into a word. These words are woven into cartoons that can compete, say observers, with any commercial production.

Reinforcement materials are used by both parent and child in the home. The parent reads part of the story from a specially prepared script. The child articulates key words in context by actually repeating them or reading them from his own book.

A series of 20 lessons designed to teach 14 words was field tested last August. From this, children are expected to teach themselves approximately 15 additional words. Eventually, the lab hopes to develop about 300 cartoons, tape recordings, slides, filmstrips, and supplementary printed materials for children, parents, and teachers.

Another challenge to the TV set to become a teacher for 25 million pre-school-age children (up to age 6) comes from the National Instructional Television Center (NIT). Its report, Television Guidelines for Early Childhood Education, prepared by early childhood authorities, covers characteristics of young children, their learning goals, and how TV could relate to both the personality and education of the 3- to 8-year-old youngsters of America.

"We anticipate the time," says the report, "when television programs will be used flexibly as a self-choice experience, when children can revisit a program just as they now do a favorite story, when they can 'scan' as well as become enmeshed in a program. We have confidence that a young child will take from a program that which has some meaning for him. Under such conditions, quality television programming can provide young children with significant experiences."

NIT took the report's recommendations, established a consortium of state educational TV networks, community ETV stations, and other instructional TV agencies, and produced a series that follows the proposed guidelines. "Ripples," aimed at kindergartners and first graders, consists of 36 color films, 15 minutes long, each one dealing with something that is likely to happen in a young child's everyday life. In showing the relationship of the child to his environment, the series stresses the differences between fantasy and reality, and the relationships of things. The series was released in the fall of 1970, along with a teacher-parent manual.

## Where To Find Teachers

If present trends continue, there will be an additional 5 million children, 3 to 5 years old, enrolled in public or voluntary programs by 1975. Yet in 1968, the year of the latest available statistics, only 3,200 teachers prepared to work at the early childhood level were graduated from American colleges and universities.

A survey by the Joint Committee on the Preparation of Nursery and Kindergarten Teachers indicates that the children are outstripping the planners. The Committee discovered that few states have training programs for paraprofessionals in this field. Few states have certification requirements for preschool personnel. In 1967 only six states had special certificates for nursery school and kindergarten teachers and only five had a special endorsement on elementary certificates.

To meet the coming crisis in demands for personnel, the Committee dropped stringent certification requirements and urged great flexibility in the se-

### 800,000 Additional Personnel?

If every 3-, 4-, and 5-year-old in this country were in some form of preschool program, say government sources, 800,000 additional personnel would be required to maintain a ratio of one adult to every 10 children. Experience suggests, say these sources, that a team of personnel, encompassing a variety of skills and roles within that team, may be the most effective pattern of staffing. The value of volunteers and aides has been clearly shown in many experimental programs, but the team requires trained leadership. Furthermore, since American parents have traditionally assumed the responsibility for the "education" of their children from birth through age 5, the need for training programs for parents also seems particularly compelling.

lection of teachers, based primarily upon competence in working with young children. Its recommendations particularly open the way for the paraprofessional, who proved to be a necessary part of Head Start programs:

Able people should not be discouraged from entering or staying in teaching because of certification requirements as they are often stated today. Requirements for entry level, regardless of the position, should be sufficiently flexible for persons who have limited training or experience to begin working with children and to pursue the requirements of training and competence needed to qualify for advancement within the profession.

The Committee does not want a single college or university in an area to have full responsibility or control over the preparation of personnel for early childhood education. They should have major responsibility for the preparation of "the trainers of trainers," says the Committee, but where there is no institution qualified to do this, the responsibility should be undertaken by professional organizations, state departments of education, or local school districts, using qualified consultants.

The major points of the Committee's report:

- The vulnerability of young children necessitates quality educational programs for them. "Something" is not necessarily better than nothing.
- The team approach to instruction is vital to the operation of programs for young children and should be covered in the preparation of personnel.
- Teachers and other personnel involved in the education of young children should be evaluated on the basis of competence and suitability of personality as well as by usual procedures.
- A system of evaluating their competence should involve teams of capable, experienced individuals drawn from faculties, professional organizations, state departments of education, and community agencies.
- College faculties should be hired on the basis of behavioral competencies and experience. Lack of the doctorate should not be used as an obstacle to bringing able people onto college faculties.
- The concept of the career ladder, or upward professional mobility, should be made a legitimate part of professional education and certification or licensure.
- Specific examples of educational personnel actually functioning to reach desirable goals can be identified and described.

This year about \$5 million will be spent under the Education Professions Development Act (EPDA) for early childhood training, with emphasis on programs that train teachers of others. Last year, the Teacher Corps, another EPDA program that trains teachers for low income areas through a combination of graduate study, classroom internship, and community involvement, devoted seven out of its 60 programs to work with interns at the kindergarten level.

## BUT DOES IT WORK?

Sprouting like grass between city sidewalks, compensatory education programs for the disadvantaged, including preschoolers, became a familiar scene in the mid-1960's. Today, through various programs, the federal government gives support to 1.3 million preschoolers, most of whom are disadvantaged.

Nourished by federal funds and fed by American optimism, some 25,000 compensatory projects bloom forth each year under Titles I and III of ESEA alone--each one hopefully destined to erase, minimize, transform, or "make up" for the handicaps carried to school by the child whose color and conditions of life might otherwise guarantee failure.

About 340,000 preschool and kindergarten youngsters participate in Title I programs where initiative is in the hands of the states, with innovation strongly favored by Washington fund-dispensers.

Another 480,000 youngsters will be enrolled in summer or full-year Head Start programs in 1970. Back in 1965 when the Office of Economic Opportunity (OEO) announced the beginning of the "war on poverty" and asked for planning requests from local communities, they discovered an enormous pint-sized constituency waiting on the doorstep. Overwhelmed by the request for funds for preschool education, OEO lumped the proposals into a special office called Head Start (which has since been moved to the Office of Child Development within the purview of the Dept. of Health, Education, and Welfare).

It soon became obvious that Head Start was more than a temporary political lark--it was serious business for the estimated 5 million preschool children with health, social, and intellectual drawbacks caused by their parents' economic poverty.

Head Start has suffered more than its share of brickbats, considering the miracles-on-a-shoestring it was asked to perform, but most educators would probably agree with J. McVicker Hunt that so far as he knows, "none of the Head Start programs has done any harm, and most have done considerable good."

There are difficult questions still unresolved, however, as to how teachers should be trained, how best to involve parents, at what point "intervention" should come in the child's life, what techniques really make a difference, how Head Start should be meshed with "regular" school programs. And federal funding has never matched local need.

In the 1960's before Head Start and before ESEA, the question being asked by a nation appalled by the effects of poverty and discrimination on its youngest citizens was, "What is being done?" Today, with thousands of projects under way and billions of dollars being spent, the question has become: "What works? What kinds of compensatory programs actually do erase, minimize, and transform educational deficiencies in disadvantaged children?"

The late Sen. Robert F. Kennedy (D-N.Y.) was one of the first to pose the question. At a 1968 conference of the Institute for the Study of Democratic Institutions in Santa Barbara, he said: "I wonder if we really know the best way to spend the money that we turn over to a locality. Let's assume that \$5,000 in federal funds is available for 50 children, and a teacher must decide how it is to be spent. Do we know the best way of spending that sum? Would it be to hire a teacher's aide? Would it be to give a remedial reading course? Would it be to buy television sets or to bring in other kinds of electronic equipment? Would it be to have extra courses in the afternoon, in the evening, or on Saturday? Would it be to give the teacher \$5,000 to improve his own education?"

All of these uses, said Kennedy, were being made of money appropriated by Congress, but he had "yet to see any agreement on the best program. As I go around New York City and elsewhere," he went on, "and see the considerable amount of money that has been appropriated, I expect to find at least some changes that are having an effect on the child. But I don't. When I ask the teachers whether they are aware that the money has come in, or what the money is being used for in their particular schools, I never receive a satisfactory answer. If we gave all the schools all the money they could use, would they know how to use it? Do we at the federal level know how to use it?"

Shortly thereafter, the U.S. Office of Education set out to answer the Senator's questions. It proposed to winnow out from the vast array of projects of every shape, size, and description those that could prove, by objective criteria, that children had benefited. The American Institutes for Research in the Behavioral Sciences (AIR) of Palo Alto, Calif., was given the job. AIR aimed to "identify, select, analyze, and describe educational programs for culturally disadvantaged children from preschool through grade 12 which had yielded measured benefits of cognitive achievement."

Only compensatory programs whose directors had measured achievement through standardized tests were included in the AIR study. But an improvement in achievement scores was not sufficient to identify a successful program. The gain had to exceed that made by a control group over the same time period, or to exceed national norms.

In addition, the term "successful" was to be applied only to programs that produced pupil gains in language or numerical skills--reading, speaking fluency, word recognition, arithmetic, and, in some cases, mathematics. If, for example, a program succeeded in improving pupil attitudes but failed in academics during the observation period, it was considered to be unsuccessful.

AIR researchers began by studying written reports of more than 1,000 compensatory education projects of the previous five years (1963-68), collected details on 400, and visited 98 from which the final selections were made.

## **11 Preschool Success Stories**

The eventual "blue-ribbon" list contained 31 programs meeting the strict criteria--11 of which were preschool projects. These compensatory education programs, which "produced significant achievement among educationally deprived children," covered 15-month-old infants to first graders, were conducted in small towns and big cities, involved just a handful of children or several hundred. These 11 "success stories" are reported here in some detail because they contain many cues for the educator considering the needs of the young of his own community--and what he could or should be doing about them.

### **Infant Education Project, Washington, D.C.**

Despite the growing support for the notion that early education had better start in the crib, the AIR study tabbed as "successful" only one infant education program. Operated under the direction of psychologist Earl S. Schaefer of the National Institute of Mental Health, it involved 58 fifteen-month-old black male babies from the city's poverty areas and was designed to discover how they would respond to intellectual stimulation. The "experimental" group included 28 babies with 30 others in the "control" group. At the start, the IQ's of the two groups were about the same, 105 and 108.

Eight women tutors--all college graduates with some experience in the inner city, and each armed with three months of special training--visited each of the babies in his home for one hour per day, five days per week, until he turned 3 years old. The tutor talked with the child, showed him pictures, taught him new words, sang songs or played records, read from books, went on walks with him, helped him to color pictures or construct simple jigsaw puzzles. The child's mother and other family members were welcome to join in, but were not required to do so. When a mother would show interest in furthering the child's learning, the tutor would leave books and toys in the home. Each mother was paid \$1 per tutoring session, and \$10 every time she brought the child to one of several test-taking sessions.

What were the results? By age 3, the mean IQ of the experimental children had remained about the same, but the control group's had steadily declined until there was a difference of 17 points between the two groups. The tutored babies also did significantly better on picture, vocabulary, and perceptual tests.

Explaining why the control group's mean IQ declined, Schaefer explains that IQ tests given to the very young must measure primarily sensorimotor skills, basically muscular reactions to sensations, because children so young do not have usable vocabularies. By age 3 when children can verbalize, IQ tests include verbal and intellectual measures. The daily intellectual exercise received by the stimulated group developed the skills that counted most on an IQ test at age 3. The control group, lacking the daily stimulation, fell down where the IQ test emphasized verbal and mental, rather than sensorimotor skills. Moreover, as Schaefer and others have pointed out, other studies show that once this opportunity for intellectual stimulation is lost, it can never be fully regained.

The D.C. program also had side benefits. As time went on, tutors became increasingly accepted in the home and neighborhood and were not regarded as "inspectors" or welfare agents. As the tutor gained rapport with the mother and other family members, she tended to become a confidante and adviser on such matters as budgets and use of community resources.

But the tutors had problems too. Several families moved often and it was hard to locate them; sometimes the child was not ready to participate when she arrived. Frequently there was no quiet place in the home to hold the tutoring session. Among the suggestions that grew out of the project was that future programs might use a neighborhood learning center as a quiet place for tutoring, that mothers and high school girls might be trained to do the tutoring, and that maybe the "stimulating" regime ought to start with infants only 6 months old.

For further information, contact Earl S. Schaefer, National Institute of Mental Health, 5454 Wisconsin Ave., Chevy Chase, Md. 20203.

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### Academic Preschool, Champaign, Illinois

Painfully aware of the ticking of the clock, Champaign's Academic Preschool is a program-in-a-hurry, run on the theory that poor youngsters who are already lagging behind their middle-class contemporaries must learn twice as fast to catch up. Innovators Carl Bereiter and Siegfried Engelmann, two of the most controversial of the new breed of theoreticians and practitioners in the early education field, believe that disadvantaged 4- and 5-year-olds can and will absorb intellectual growth with academic force-feeding, and that they have no time to lose.

The most efficient way of helping these children catch up, Bereiter and Engelmann believe, is direct teaching of the things they need to get along in school--language, arithmetic, and reading. Furthermore, since time is at such a premium, all of the curriculum materials used must be carefully organized and presented in logical sequence.

In the Champaign experiment cited by AIR, 15 mostly Negro 4- and 5-year-olds from families of unskilled and semiskilled laborers (some on welfare) spent two years in the program prior to entering first grade. Their 28 contemporaries in the "comparison" group received one year of traditional preschool education and one year of public school kindergarten. In each case, the pupil-teacher ratio was five to one.

Fifteen "minimum" goals were set for the children to learn such academic concepts as spoken language, counting, recognition of vowels and consonants, how to select rhyming words, and others. The emphasis was on rapid attainment of these goals.

The classes, conducted for two hours a day, five days a week, were presented as "work sessions" to the children. Workmanlike behavior (watching closely, sitting up straight, answering regularly) was rewarded by verbal praise, and during the first month, by cookies. Children were reprimanded

for deviations from the rules, and if this didn't succeed, they were excluded from the instructional groups for short periods of time.

Teachers were trained to teach in the fastest, most economical manner possible. For example, while the rate at which questions were presented to the group or to individuals varied with the task, the teacher often introduced as many as 20 questions per minute. Teachers were also told: Don't assume the children know anything unless they have demonstrated that they do; get as many correct responses and as few incorrect responses out of the children during the allotted time as possible; teach the behavior necessary for successful classroom performance.

As the AIR report notes, the Champaign teacher did "not have the luxury of first shaping behavior and then introducing academic content." She simultaneously introduced the academic content and the rules of behavior associated with the content. The focus, though, was always on the behavior related to the task, never on behavior in the abstract. Behavior "reinforcement" on the positive side could be cookies, raisins, juice, the use of praise ("Wow, did you hear Sidney? He's a smart boy, let's clap for him. He is smart and he's working hard."), and personalization. Negative behavior could bring loss of food reinforcers, additional work, scolding by the teacher, repetition of the task.

In a new booklet entitled Reducing Behavior Problems, Becker says a cardinal rule for the teacher is to "reinforce behavior incompatible with that you wish to eliminate." What it boils down to is bestowing praise when the student is doing something that keeps him from doing whatever it is the teacher doesn't want him to do. If he runs around the classroom a lot, she praises him for sitting still. Better yet, she praises him for sitting still and reading an assignment. "A great economy of effort is achieved if one teaches important social and cognitive skills in the process of eliminating disruptive behaviors," Becker notes. He says the Champaign experiment and later ones have proved that social reinforcement works for 80 to 90% of the so-called problem children.

The "all-business" atmosphere of the Academic Preschool extended to the toys which were limited to jigsaw puzzles, form boards, books, drawing and tracing materials, Cuisenaire rods, a miniature house, barn, and set of farm animals. The project staff either designed their own curriculum materials or adapted them from resources on the open market. Parents were not invited to take part directly, but they were asked to come to meetings and were visited at home by college students who worked as teacher interns in the project.

The Champaign experimental group thrived on this regimen, gaining 17.14 IQ points after the first year, and 8.61 IQ points after the second. The comparison group, on the other hand, only gained 8.07 IQ points after one year, and lost 2.96 after the second.

Youngsters who completed the two-year experimental program also had a mean reading grade level of 2.60, a mean arithmetic level of 1.87, and a mean spelling level of 1.87 to take with them into the first grade. They also had something else, said the investigators: "a notable confidence in their abilities to meet a challenge."

Carnegie Corp. reported that in 1969 some 2,000 children from kindergarten through second grade were using Bereiter-Engelmann materials and methods under USOE's Follow-Through program. Carnegie has made two grants to support teacher training in the method and has sponsored a teacher-training film.

For further information on the Champaign project, contact either Carl Bereiter, Ontario Institute for Studies in Education, Bloor Street, Toronto, Ontario, Canada; or Siegfried Engelmann, Institute for Research on Exceptional Children, Wolfe School, 4th and Healey, Champaign, Ill.

### **Ameliorative Preschool Program, Champaign, Illinois**

Forewarned is forearmed, so Champaign's Ameliorative Preschool Program also made a deliberate attempt to prepare preschool youngsters for what they will meet in "regular" school. According to Merle B. Karnes of the Institute for Research on Exceptional Children, U. of Illinois, the rationale of the program was this: if disadvantaged youngsters spent one year in a structured preschool setting giving them lots of practice in talking, manipulating, and using language games, then received one hour per day supplementary teaching in the kindergarten, they would be prepared for first grade.

Thirty 4-year-olds (two-thirds of them Negro, one-third of them white), took part in the first experiment in 1965. They were divided into three classes: one-third of each class had IQ's over 100, one-third between 90 and 99, one-third between 70 and 89. Their achievement was compared with a "control" group attending a traditional nursery school.

In 1965 each child went through an extensive battery of standardized tests before entering the project. The "experimentals" were bused to school, attending about 135 minutes each day for approximately eight months. Each class had three teachers, with one teacher serving each of the IQ groupings.

A typical day was split into three formal learning periods devoted respectively to mathematical concepts, language arts (including reading readiness), and social studies/science. Cubicles supplied with materials for studying each of these subjects were situated off a main assembly room. Each teacher moved from one cubicle to another with her group of five children, the group staying with her throughout the day. In addition to the three formal periods, there was a music period, directed playtime, and "juice time." During music and directed playtimes, children could move out of their own teacher's group. The directed play made no use of outdoor equipment or traditional preschool toys, but stressed visual-motor activities such as puzzles, blocks, clay, nesting and stacking toys, and pounding sets.

According to Mrs. Karnes, the general goals of the social studies and science curriculum were to teach useful vocabulary, classification skills, sensory discrimination, and observation of natural phenomena--self, family, home, community, weather, time, and plant growth.

In math, children were to develop basic number concepts, manipulative skills, and the appropriate vocabulary. Language development, emphasized

throughout the day in all activities, was taught through a special game format using card packs, lotto, models and miniatures, and games requiring sorting, matching, and classifying.

Multiple copies of inexpensive books, says Mrs. Karnes, was the most important instructional tool in the language arts and reading readiness curriculum. As the teacher read, each child held his own copy of the book, learned to hold it right side up, to turn the pages singly and in sequence, to associate the pictures with the story being read, to develop left-to-right progression, and to associate the printed symbol with meaning.

Although the children went through several tests, the crucial one occurred when they completed first grade. The experimental group scored significantly better on achievement tests of reading, language, and arithmetic than did their peers in the traditional nursery program, and in fact, performed above grade level. Mrs. Karnes has estimated that the cost per child for a school wishing to duplicate the program would be about \$620 a year.

As a result of these long-range experiments with the ameliorative and academic preschools, U. of Illinois researchers have become convinced that well planned, highly structured programs help disadvantaged children the most. But they have also come to believe that even the best designed program won't overcome the full effects of a disadvantaged background if the children are in it for only one year.

As described earlier, both the ameliorative program and the drill-practice approach of Bereiter-Engelmann were tightly structured with a pupil-teacher ratio of five to one. The programs with which they were compared took place in a Montessori preschool and two traditional nursery schools, one of which combined middle-class and poor children.

After one year of special instruction, all of the children, except those in the Bereiter-Engelmann group, went on to public kindergarten (with the ameliorative group children getting an hour a day supplementary help). Youngsters being studied by Bereiter-Engelmann stayed with them for another year of intensive treatment.

Although children in most of the programs made some gains in IQ, vocabulary, and other areas during the first year of preschool, only those in the Bereiter-Engelmann program--with its low pupil-teacher ratio and constant and intensive language interaction--continued their growth the second year.

It seems clear, says Mrs. Karnes, that "one year of preschool programming, no matter how immediately effective, does not equip the disadvantaged children to maintain their performance in kindergarten." She speculates that the special experimental programs showed that a poor child needs intensive interaction with the teacher to gain maximum language skills, and the kindergarten teacher with her big class simply doesn't have time for such ceaseless face-to-face dialogue.

For further information on the Ameliorative Program, contact Merle E. Karnes, Institute for Research on Exceptional Children, U. of Illinois, 232 Colonel Wolf Preschool, 403 E. Healey St., Champaign, Ill.

## **Early Education Project, New York City**

Long before passage of the Elementary and Secondary Education Act, Martin Deutsch of New York U. (NYU) was studying and working with poor children of the city. His studies, beginning in 1958, have been carried on through the Early Childhood Project of the Institute for Developmental Studies at NYU. In the beginning, he says, his group felt that "early intervention" in the education of the youngsters of poverty would be enough to prepare them for success in the primary grades. But as the years went on, the group became convinced this was not enough and that these children must have "continuous and appropriately sequenced reinforcements" in the early grades.

In 1964, Deutsch's program had been expanded to extend from prekindergarten through grade three, and by 1968, it included 17 classes in four public schools. The children are almost all black and from an area in Harlem typified by broken families, tenements, and crowded high-rise buildings. In all classes, says Deutsch, the "consistent curriculum emphasis" is on the cognitive areas of language, perception, concept-formation, and self-image. These are the areas, he says, "in which the disadvantaged child has been least stimulated by his early environment, and which are most operative in successful school learning."

The style of learning advocated by the project sticks to the principles of programmed instruction: learners proceed by small steps through a carefully ordered sequence, with success and immediate feedback of results. The curriculum is organized as five "programs": prekindergarten and kindergarten, reading, mathematics, science, and creative dramatics.

The Deutsch studies have sparked innovations copied by many other preschool ventures. For example: the use of partitioned listening centers equipped with tape recorder and earphones where individual children can listen to the teacher's recorded voice telling their favorite stories and often pausing to elicit verbal response from the child; telephone instruments for conversations between teacher and child who sit some distance from each other, so that the child is forced to speak distinctly and to use words rather than "body English" to communicate his ideas; emphasis on the child's name. Many children entering the program, says Deutsch, "did not seem to know that people have names," so every day the teachers greet each child by name, and expect to be addressed by name in return. This is aimed, of course, toward developing that all-important "sense of self," and Deutsch uses other props for this purpose: a full-length mirror in each classroom in which many new children see all of themselves for the first time; the camera in each room enabling a child to be photographed in various activities; the child-made photo albums for carrying home at Christmas.

Another project finding about disadvantaged children was that they tend to have a "now" orientation, but only dim perceptions of past or future, weeks or months. A "calendar curriculum" has been devised with the teacher posting a one-week calendar which all can see, then marking off each day as it occurs and talking about it, then progressing to weeks and months. Eventually children mark their own personal calendars each day. Teachers add variations--games which build number and phonic skills as well as the names of the days. ("Find the box for the day in the third week that begins with the sound 't.'")

Parents of children in the project come to monthly meetings where they learn how to help their children learn at home--everything from making lotto games together to asking questions from storybooks brought home by third graders. They meet in a Parent Center donated by a local church where they can also swap tips on sewing and cooking, air complaints, and organize special events (40 parents arranged and took part in a trip to the United Nations). The program also utilizes community aides who visit parents in the homes, pass the word about meetings and community resources, man the parent center, and help with problems interfering with the child's schooling. The project staff also includes a social worker.

Deutsch says the Early Education Project's curriculum is not static, but constantly undergoes revision and refinement, and that overall trends are not yet discernible for all "waves" of children involved. Youngsters in the preschool enrichment group, however, do make gains in IQ which they are able to maintain, he says, and AIR sums up the long-time study as a "detailed and complex experimental program which is appreciated by its participants, both adults and children."

For further information on the Early Education Project, write to Martin Deutsch, Institute for Developmental Studies, School of Education, New York U., New York, N.Y.

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### Preschool Program, Fresno, California

Fresno's program aims primarily at 3- to 5-year-old children who speak English as a second language. It began in the school system as a 1964 pilot project and has grown in recent years to include more than 750 students in 50 classes at 19 schools. The emphasis is on verbal communication and vocabulary development, with each child spending most of his class time in a small discussion-and-activity group that includes one adult and a few children. This way the child can enter often into the conversation, rather than having to raise his hand and wait until the teacher notices him, says coordinator Frances Forrester. New words in English are presented in the context of the pupil's activities, which include games, songs, poems, and finger plays. There are no more than 15 children per class, along with one teacher, one teacher aide, and at least one parent volunteer. Some children remain in the program for two years, some for one, but all remain until ready for kindergarten.

Parents are crucial to the program, says Mrs. Forrester, and not just as "helpers." Each parent leads a discussion-activity group at least once a week and plays a full instructional role. In addition, she notes, they "mix paint, serve food, read stories, turn jump ropes, rock children, rub backs at rest time, see that children do a good job of hand-washing, make pinatas, dry tears, answer questions, repair equipment, bring animals to school, and generally contribute much to the children's program." There is a parent advisory committee, and parent meetings are held in each preschool center at least twice a month.

Study trips rate very big in this program. Each class takes five bus trips a year in addition to many walking trips and outings via parent car

pool. In addition, parents are occasionally taken on a bus trip first, so they'll become familiar with the site to be visited. Sometimes the study trips are exclusively for parents--to the art center, museum, a dam, a dairy, a rug mill.

Ethnic groups in the preschool--Caucasian, Mexican-American, and Negro--were tested separately to see whether there was any difference in the benefits gained from the experience. All three groups made significant gains during the year studied by AIR--even though they had come to the program with differing verbal and vocabulary skills. Of the 47 classes tested, children in 38 of them gained significantly in IQ. Whether this gain will be lasting, or will result in better performance in the primary grades, "has yet to be demonstrated," said the project planners. After 1968, they began to plan follow-through programs through kindergarten.

One by-product, says Mrs. Forrester, is the increased "sense of community" among parents. She cites their planning of a San Francisco excursion and a Mexican-American fair. Parents also became interested in upgrading their own education to the point that every mother of a child in one preschool enrolled in adult education courses.

In 1967-68, according to the coordinator, the total cost of the program was \$480,000 for 750 children.

For further information on the Fresno Preschool Program, write to Mrs. Frances Forrester, Coordinator, Preschool Program, 305 E. Belgravia Ave., Fresno, Calif. 93706.

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## Diagnostically Based Curriculum, Bloomington, Indiana

To teach 139 mostly white 5-year-olds with IQ's ranging from 50 to 85, who come from the Appalachian towns of southern Indiana, researchers developed a diagnostically based curriculum consisting of 68 structured language lessons. Before the program began, each child was thoroughly tested to determine his learning deficits in language, concept, and fine motor development.

In three similar studies conducted between 1964-67 under the aegis of the U. of Indiana (Bloomington), 15 children were placed in either an Experimental Preschool (EPS), Kindergarten Contrast (KC), or At Home Contrast (AHC) group. The EPS children received the diagnostic treatment, the KC children attended a traditional kindergarten, the AHC group received no treatment at all.

The experimental program operated from 9 a.m. until 1 p.m. each day, and unlike many other preschools, did not enlist direct parent help. Teachers were trained to be child-oriented, to utilize each teachable moment, to demonstrate rather than just "tell" concepts to the youngsters, and to develop "concrete reinforcements" for individual children.

Tangible rewards were used copiously during the early part of the year (sometimes candy, but more often, cereal products). These were always ac-

companied, says Indiana U.'s Howard H. Spicker, by verbal rewards--praise, expressions of appreciation, physical gestures of reassurance and affection. The demand for tangible rewards, he says, diminished to "almost nothing by the end of the intervention year."

Children get training in such behaviors as listening, planning, concentration, delay of gratification, working for the satisfaction of working. To develop group attention behavior, for example, the teacher might say: "Let's see if you can all be quiet for one second." A tangible reward would then be dispensed to all who achieved that goal. The "silence time" was slowly but consistently made longer and within a few weeks the children were generally quiet and receptive when the teacher considered it necessary for her instruction. Another general strategy was to review regularly with each child concrete examples of his work to help him see the kinds of improvements he had made.

The EPS group scored significantly higher in language development, IQ, and motor development than did their fellow pupils in the traditional kindergarten. And both groups showed better scores than did the children who remained at home. The scores were even better for language than for IQ development, yet both EPS and KC children slowed down on language when they reached first grade. Project planners speculate that a traditional first-grade program, though capable of maintaining IQ gains, doesn't challenge the children to capitalize on their previous achievements.

Recommendations growing out of the experiment included these:

- Explain to a teacher the rationale on which the curriculum is based so that she can translate it into educational practice.
- Refrain from using the packaged lessons alone because they are not as effective as the combined use of "ancillary" language activities and the structured lessons.
- Experiment with diagnostic instruments prior to the study to make sure they are sensitive enough to detect deficits in specific learning areas.
- Always consider the child's home environment as a cue to effective motivational devices, rewards, and punishments.
- Do not offer to pay parents for permitting their youngsters to be in a special project.
- Provide transportation to and from school; provide breakfast.
- Provide a follow-through program for grades one to three.

No specific cost estimates were made, but according to Spicker, they exceeded those of a traditional kindergarten program.

For further information on the Diagnostically Based Curriculum, write to: Howard H. Spicker, Indiana U., Bloomington, Ind.

## **Project Early Push, Buffalo, New York**

One of the big-city programs for the very young cited as "successful" by AIR has operated in Buffalo since 1966. In the 1967-68 year, 650 children between the ages of 3 years, 9 months and 4 years, 9 months were involved in prekindergarten classes in 14 public and three parochial schools.

The classes were limited to about 15 pupils each, and each classroom was supplied with equipment and materials from a standard list which included 19 different articles of furniture, 16 housekeeping items, 27 musical instruments, two audiovisual items, five locomotor toys, four types of woodworking equipment, three pieces of science equipment, and six miscellaneous items. The project teachers (12 full-time, 13 half-time) arranged these into a pleasant setting within which youngsters got a generally unstructured program and not many formal "lessons." The staff also included 17 full-time and three half-time teacher aides.

The curriculum, said project administrator Joan C. Downey, was adapted from other successful preschool programs and from recommendations of the New York State Education Dept.'s Bureau of Child Development and Parent Education.

Parents were persuaded to take part by a full-time school-home coordinator who drummed up enthusiasm, supervised parent meetings and visits to the classrooms, and published a monthly parent newsletter (which contained articles written by the parents as well as by the staff). Each year two parent-teacher workshops were held to share ideas on how to boost children's learning at home. Miss Downey notes that the children with "active" parents who had visited the classroom at least five times and attended at least three parent meetings made greater gains on tests than did the children with "inactive" parents. There wasn't much "inactivity," though. Parent participation was estimated at 85% during the 1966-67 year, and it went up to 95% the following year. More than 70% attended the workshops. On the average, children in the program gained 10 IQ points. Boys gained an average of eight points, while the girls had an average 12-point gain.

The program, which was financed in full from ESEA Title I grants, cost about \$550 per pupil, for a total cost in 1967-68 of \$342,316. Ninety percent went for salaries and the rest for teaching supplies and equipment. The daily "extended snack" served to each child was substantial (hot tuna fish casserole, fruit cup, and milk; or scrambled eggs, sausage, orange sections, and milk). It cost 15¢ per child per day, and was designed, Miss Downey says, to provide both exposure to a greater variety of foods and ample nutrition for these children of the poor.

The program turned up other benefits. Each year, more teachers applied for posts in the project than there were openings, and there was less than the usual staff turnover. More than half of the teacher aides returned to school themselves--most hoping to eventually teach in the program. And the classes filled up rapidly each year.

For further information on Project Early Push, write to Miss Joan C. Downey, Project Administrator, Special Program in Early Childhood Education, 420 City Hall, Buffalo, N.Y. 14202.

## **Language Stimulation Program, Auburn, Alabama**

Thirty-two black first graders ranging in age from 6 to 8 years old, all enrolled in the same all-black elementary school, comprised the target for this Auburn experiment. The children's mean IQ was 75, with a range of 62 to 91, and their language development lagged almost two years below their age level.

Each student to receive the special training was matched with another student in the regular classrooms, making 32 matched pairs. The curriculum of 280 language stimulation lessons developed by Peabody College for Teachers at Nashville, Tenn., was the main tool used to determine whether systematic emphasis on language development could raise the children's IQ, language age scores, and reading ability.

The 32 boys and girls were randomly placed into one of four groups, without regard to their regular classroom assignment. These groups were taken out of their regular first-grade classes to meet, one group at a time, in a vacant classroom four days a week. The sessions began at 8 a.m. and lasted about one hour. The two Peabody teachers each worked with two groups. Besides teaching the first 40 Peabody lessons, the teachers read stories from supplementary sources and devised supplementary language activities from the subsequent Peabody lessons.

After ten weeks of the program, the experimental group had gained significantly in IQ, mental age, and language age over their "match" counterparts. Even more important, they maintained this superiority through most of the fourth grade, as shown by subsequent tests of the "matched pairs." The experimentals also scored significantly higher than the control group on measures of reading ability (although both groups remained below grade level in this skill).

John L. Carter, who directed the program and wrote his doctoral dissertation on it, also observed that of the original sample of 1964-65, eight pupils who had been in the control group were in special education classes by 1969, whereas only one of the experimental youngsters had to attend such a class.

For further information on the Language Stimulation Program, contact: John L. Carter, College of Education, U. of Houston, Houston, Texas 77004.

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## **Preschool Program, Oakland, California**

Some 600 Negro 3- and 4-year-olds have taken part in Oakland's 12 preschool centers each year in this program, which began in 1966.

Designed to augment the children's conceptual and cognitive development, the program leans heavily on teacher aides, parent volunteers, and school-community workers. There are 40 aides who work part time in each of 40 classes. Almost all are black, members of the communities from which the children come. The aides read to the children; lead finger plays and songs;

prepare snacks; encourage good manners during snacktime; participate with the children in ball and jump rope games; make a variety of materials; supervise cleanup; and help on walks, science experiments, and library visits.

Parents are recruited for similar tasks with the idea that at least one parent will be available in each class to help the teacher and teacher aide (parents were not paid). Working with these interested adults who are not from their immediate families, says supervisor Carolyn Hunter, helps the youngster to adjust socially and emotionally.

One full-time and six part-time school community workers visit the classrooms and the homes. At the homes they show film slides and learning materials to keep parents posted on what's going on at school, and to encourage them to attend the monthly meetings held at each of the 12 centers.

The adult-pupil ratio in each classroom is about three or four adults to 15 children. In each case, says Mrs. Hunter, the teacher "manages" the instructional environment, leading her team of one teacher aide and one or two parent volunteers. In addition, she collaborates with the nurse and psychologist on the physical and emotional health of the youngsters, and periodically checks with the community workers on what they are gleaned from home and classroom visits.

The AIR report shows that gains made by children in the Oakland centers are considerable, placing them about nine IQ points above children from the same neighborhoods who have not had the preschool experience. The cost per pupil comes to something over \$1,000 per year.

For further information on the Oakland Preschool Program, write to Mrs. Carolyn Hunter, Supervisor of Preschool Program Curriculum, Oakland Public Schools, 831 E. 14th St., Oakland, Calif.

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### Perry Preschool Project, Ypsilanti, Michigan

Not only did the Perry Preschool 3- and 4-year-olds attend a daily morning session at school, but their teachers turned up once a week at their homes to give them individual tutoring.

About 24 black youngsters with IQ's up to 85 took part each year in this school-organized, district-sponsored project for culturally deprived children.

Director David P. Weikart describes their instruction as "verbal bombardment," with the teacher maintaining a steady stream of questions and comments to draw the child's attention to various aspects of his environment. She constantly talked when rewarding him and disciplining him, as well as when instructing him in academic pursuits, with the complexity of her language increasing as the child acquired his own verbal ability.

Four preschool teachers jointly operated the morning program which was divided into two main instructional periods, separated by refreshments. The "early morning" instruction took place in the largest of the school's three

rooms. Each teacher was stationed in one of the four "area teaching" divisions--arts and crafts, housekeeping, pre-academic, and block activities. During this time, the child could select any activity, join in or just look, and move from one area to another. The "late morning" session was more highly structured. Here the children were divided into two groups, approximately 12 students per group, with two teachers. The groups met for approximately 20 minutes in two small separate classrooms and were introduced to instructional units. The more advanced group undertook relatively long units on language usage, refined auditory discrimination, and complex dramatic play. The less advanced (usually the 3-year-olds) spent time in basic skill training and simple pre-math concepts.

The 90-minute, once-a-week home visit by teachers to each child was designed to involve his mother in his education, to demonstrate techniques, and to tutor the child on a one-to-one basis. Among the activities the teacher and child might do at home were listening to records, imitating and classifying sounds, counting silverware, planting seeds, making Jello, tracing dotted lines, and identifying objects. There were also many field trips designed to reinforce concepts taught in the morning programs. If a child seemed not to grasp the significance of a group field trip, the teacher (and sometimes the mother too) would return with the child to the site of the former visit.

The children in the experiment were compared to those in a traditional school, and on tests after the first and second grades of school, showed significantly higher scores in reading, language, and mathematics achievement. The total cost of the program during the 1966-67 year was about \$51,000 for 48 children.

Through this and other programs, Weikart was struck by the possibilities of working with poverty-area mothers--beginning when their child is between 3 and 4 months old. Weikart, who is director of research and development for the Ypsilanti Public Schools, and Dolores Lambie have begun a Carnegie-supported project to send a specially trained public school teacher into the home to work with mothers and their young babies about an hour every week.

They have learned that most poor mothers simply do not know what young babies' capabilities are. For example, they tend to underrate what their infant is capable of doing (or is in fact doing) at the moment, yet they grossly overrate what he might be able to do very shortly. Hence, says Weikart, they often tend to do too much for a baby at a given time--not even letting him reach for an object, for example--but then are disappointed when he isn't walking the next week.

The teachers who go into the homes simply play with and talk to the infants, commenting to the mother on new developments, hinting at what to expect next. A teacher might say, "Look, he's learned to put things inside things!" admiringly. Weikart believes that as the mother develops confidence in the teacher's good will and integrity, and in her baby's "normalcy" and growth, she will also develop confidence in herself as a mother and teacher.

For further information, contact David P. Weikart, Director, Perry Preschool Project, Ypsilanti Public Schools, Ypsilanti, Mich.

## **Learning To Learn Program, Jacksonville, Florida**

Eschewing emphasis on factual content or knowledge, the Jacksonville program aimed to arm poor children with the skills to cope with problems. Herbert J. Sprigle, clinical psychologist turned educator, has developed a series of well engineered games having to do with clothing, food, animals, furniture, and transportation. Each activity leads by steps from the very concrete to the more abstract. Thus, in the food game, a real orange is replaced by a picture of an orange, and ultimately the game becomes highly verbal and requires statements about oranges. Special teaching methods guarantee success to every child, says Sprigle, regardless of his abilities.

Under a Head Start research grant in 1965-66, Sprigle divided 72 disadvantaged 5-year-old Negro children into three groups of 24. One was the Learning to Learn group, another was a church-run "traditional" kindergarten, and the third group stayed home, unexposed to any preschool training.

Sprigle believes that the child's ability to think, reason, and learn follows an orderly sequence of growth with periods of transition--from motor to perceptual to symbolic levels. Sprigle also reasons that learning is an active ongoing process that occurs when the material the child is using is appealing and attracts his curiosity, makes him feel reasonably sure of what he's doing, directs him toward a goal, and gives him some idea how close he's getting to the goal.

The program required two classroom areas. One was a big work-play area where youngsters could engage in a variety of activities which they picked for themselves and did not have to compete for space or tools. A smaller room, set apart from the work-play area, was used for more structured learning. From the work-play period which lasted about 90 minutes each morning, two to four children would go to the small room to engage in small learning activities (10 to 20 minutes per group).

This continuous regrouping, says Sprigle, permitted the child to work on one level with one kind of material (a number game) and at another level with another kind (a language game). The child could see he was better in some things than in others, and was always assured of success because he was introduced to new games and activities at his own pace. The rest of the day was devoted to large-group activities based on that day's small-group work. For example, if small-group work had emphasized numbers, the children might be asked to draw a set of objects representing a specific number.

Sprigle proved to be a master at getting fathers and mothers to meetings. He shrewdly scheduled the meetings for Sunday afternoon and if parents weren't present 15 minutes before the session was to start, he telephoned them. Result: 100% attendance.

Much of the meeting was devoted to videotapes showing class activities. A typical parental reaction to the videotape, says Sprigle, was the surprised remark that his child is learning. Parents were impressed too, he says, with the "patience" of the teacher in allowing each child to work at his own pace. In fact, many a parent, Sprigle noted, squirmed uncomfortably while his child was taking the time he needed to respond to the learning situation.

He feels the videotapes are a subtle way to get across the "Learning To Learn" approach that parents can adopt at home.

Tests showed the Learning To Learn group scored about 21 IQ points over the "no training" group (which actually decreased during the year, while the traditional kindergarten's group score remained constant). Also the experimental groups are still doing markedly better in regular school than their counterparts.

Besides all this, the AIR investigators noted, the Learning to Learn children were much more "free and verbal" in taking tests. Indeed, they seemed eager for the experience, asked appropriate inquisitive questions, and showed confidence in their ability to solve problems. As for costs, the program was operated in part with OEO funds and much donated personnel time, equipment, materials, and services. Sprigle estimates it cost \$23,000, including the value of the donated items, but not that of the evaluation.

With Carnegie Corp. help, Sprigle is now expanding his curriculum both upward--through first and second grade--and downward to 4-year-olds.

For further information, contact Herbert A. Sprigle, Learning to Learn School, Inc., 1936 San Marco Blvd., Jacksonville, Fla. 32207.

## Pittsburgh and New Orleans

The foregoing include all of the "successful" preschool programs cited by AIR, but they are only a tiny fraction of the local projects in the nation which are capitalizing on the early years as the child's "prime time."

Long before ESEA or Head Start, for example, the Ford Foundation was taking an interest in compensatory education in the large cities. Some of the programs that its funding initiated in the early 1960's on an experimental basis are now flourishing as districtwide educational services. Notable among these are the preschool programs of Pittsburgh and New Orleans.

Through the Great Cities School Improvement Project, Pittsburgh received a grant in 1970 for a pilot project in team teaching in poverty area schools. The teachers quickly realized that preschools were a must for the education of disadvantaged children. Funds were provided for the addition of a community relations assistant, and he convinced community organizations to establish voluntary preschool play groups with the team teachers as consultants. The preschool program was expanded under the Ford Foundation and now covers 58 centers financed by ESEA and the Office of Economic Opportunity.

The centers, for 3- and 4-year-olds, have interest corners, as developed by Martin Deutsch, stimulating free play in all areas. Storytelling and books are greatly emphasized--each classroom has a basic library of at least 40 books, and children may select from another group for take-home books. Other special features--a hot meal for each group of children, breakfast for the morning class, lunch for the afternoon shift; eurythmics for all children, designed to use music to make them aware of basic rhythm, which they will

later learn dictates the written and spoken word; and a summer music camp for talented 4-year-olds in which parents are invited to participate.

Parent involvement is basic to the program. Weekly parent meetings at the school provide parents with a social opportunity to know each other and to learn to sew, paint, make children's toys, gifts, and decorations. They are urged to take books home, after observing storytelling, and they watch teachers' techniques for directing both play and work. Some teachers take parents on field trips to acquaint them with museums, libraries, and parks, using public transportation to acquaint the mothers with public facilities.

The preschool program uses various teaching approaches--learn by discovery, responsive environment (talking typewriters)--to prepare the children for the city's elementary school system, which is rapidly shifting to an ungraded program utilizing self-teaching devices.

The New Orleans Education Improvement Project is an experimental program for 3- and 4-year-olds jointly sponsored by the Ford Foundation, Tulane U., Dillard U., and the Orleans Parish School Board. The project covers preschool through sixth grade, using new organizational patterns, advanced educational media, and new curriculum materials. Limited to two elementary schools at this point, the project stresses indoor play, reading readiness (experimental initial teaching alphabet readiness program), music, and science.

The New Orleans project is an organized, systematic learning program which uses "movement education," also known as kinesiology. This is based upon problem-solving tasks in which apparatus, equipment, and sometimes musical instruments are used to help each pupil solve the given problems as he perceives them. Results so far show that first graders who started in the nursery program show an average gain of nine IQ points above first-grade pupils who did not attend the special preschool classes.

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### Mother-Child School in the Bronx

Both mothers and their young children--1½ to 2 years old--go to school in a unique early language development program operating out of a settlement house (Casita Maria) in the Bronx borough of New York City. Developed by Seymour J. Perlin for a neighborhood composed almost entirely of poor Puerto Rican and black families, the experimental program has three components:

- A nursery school for children who meet in a play group situation supervised by a nursery school teacher. Students from Hunter College work with the children on a one-to-one basis (the arrangements provide for three groups of 10 children each who come to the center for one hour a day, five days a week). Free play, manipulative materials, and an opportunity to communicate with a responsive adult are the basic elements of the program. The student teachers concentrate on a concept or idea before they attempt to develop any grammatical aspects.
- Group sessions for parents, who meet at the same time that their children are in class and learn how to have better verbal communication with

### **Another New York City Thrust**

According to the terms of a contract agreement between the New York City Board of Education and the United Federation of Teachers, the school system has established 50 Early Childhood Preschool Centers. These are for 3- and 4-year-old children and are housed in existing school buildings or rented facilities in the communities. Proponents say that they provide experiences in racial integration for the very young children because the Centers accept as pupils the children of teachers who work in neighborhood schools. They are expected to help in teacher recruitment by allowing teachers with families to return to active careers.

their children and how to help them at home. Meeting informally over coffee and around a conference table, the mothers discuss such things as how to read a story to children, how to improve a child's eating habits, how to talk meaningfully to children.

- Babysitting arrangements for siblings of the children in the language development program. The older children are provided with toys, books, games, and other materials and supervised by two aides. One of the reasons why the program planners rejected the idea of sending tutors to the homes of the disadvantaged children, as in some other experimental projects, was because other family members tended to get into the act.

Children who participate in the program will be given linguistic abilities tests and compared to a control group.

Perlin has chosen a difficult area to work in--children in the neighborhood average six months retardation in reading in grade two, and by the end of the sixth grade retardation has increased to more than one and one-half years. More than 50% of the families in the area are on welfare, and one of the feeder elementary schools has a 100% turnover rate each year with 1,600 children either entering or leaving annually. Perlin believes that any improvement in the capabilities of the children to perform in school must begin with their interaction with their mothers--at as early an age as possible. A side effect of the program, he believes, will be better linguistic development of all children in the family.

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### **A Chicago Showpiece**

The Nat King Cole Child-Parent Center enrolls 156 of Chicago's poorer children whose background typically propels them toward failure in school. They enroll in the center at age 3 and leave at age 9. By the time the children are 7, they are learning to read with a proficiency that equals and often surpasses national norms. And, say observers, they are doing it with an elan and enjoyment obvious to any visitor. In the Nat King Cole Center, and four others like it in Chicago, parents, pupils, and teachers are linked together in a highly personalized approach to the education of the young children.

Lorraine M. Sullivan, the District 8 superintendent who conceived the idea of the centers and organized them, also believes in the "verbal bombardment" approach--saturating the child's consciousness almost from the time he is in diapers with a wide variety of games, puzzles, stories, books, films, and above all, conversation.

Classes are limited to 15 pupils, so there is time for children to talk with the teacher and with the teacher's aide (usually the mother of a neighborhood child) assigned to each class. The teacher's job is to initiate activities; the aide's is to help carry them out.

Children stay with the same teacher and aide from the time they are 3 until they finish the third grade, when they are to move into a regular elementary school (the oldest class at the Cole Center was in the second grade in 1969-70).

The classes are conducted in a homey setting that regularly draws neighborhood mothers to a specially appointed room to chat, sew, drink coffee, and learn how to cook and manage money better.

The mothers can and do visit their children's classes whenever they want. School is conceived of as an extension of the home, and vice versa, with the apparent result, observers say, that parents become more involved in the intellectual development of the children.

"I come here because I like the atmosphere," said one parent. "It's the first time I ever felt close to a school."

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### New Rochelle's Assessment Inventory

When it comes to young children, psychologist Ann E. Boehm of Teachers College, Columbia U., thinks standardized intelligence tests leave a lot to be desired. For New Rochelle's experimental Pre-Kindergarten and Demonstration Center, she rejected such tests for measurement purposes and developed instead an Inventory of Cognitive Skills and Visual-Motor Functioning--primarily from teacher recommendations. The Inventory lists these items a child should learn: knowledge of body parts, identification of colors and shapes, number concepts, information from pictures, comprehension of simple stories, relational concepts such as "same" or "different," following directions containing multiple components such as "find the ball that is big and red," copying geometric forms, and gross motor functioning. In addition, one section of the Inventory concerns the child's overall behavior during the testing itself--his attention span and "ease of relationship."

Each of the major areas of the test is broken down into levels of difficulty. If a child finds one level difficult, he can go to a simpler level. Observational reports and teacher conferences supply further information regarding the social and emotional growth of the child.

The Inventory, used with classes of 4-year-olds who attend half-day sessions, is given during registration the week before classes begin. Teach-

ers wanted parents to be present during the administration of the Inventory--a technique that has opened up communication between parents and teachers about the school program. End of the year testing takes place during the last two weeks of school. Teacher evaluation of gains made as well as areas in need of further development of each child are passed along to the kindergarten teachers for follow-through programs.

## Ferguson-Florissant's Changing Kindergartens

The winds of change sweeping preschool education are forcing change upon many an "establishment" kindergarten. Doris M. Stumpe, assistant superintendent for elementary education of the Ferguson-Florissant School District (Ferguson, Mo.), describes how some of the new concepts in preschool education are affecting the district's kindergarten and primary grades:

- New materials are used where appropriate. The Bereiter-Engelmann math program is being piloted in one kindergarten. The Denver project pre-reading materials (Getting Ready To Read) are used districtwide in the kindergartens, and the program for parents is aired over a local TV station. The district is also conducting a pilot study of the effects of an extended-day kindergarten.
- Formal reading instruction is begun when the child is assessed as being ready. This may be during the kindergarten year or in the primary unit. (In the 1968-69 school year, approximately 20% of the children began reading in the kindergarten.) Small group instruction is based upon the needs of the individual child as assessed by teacher checklists and a battery of test measurements. Teachers use a district-developed curriculum guide which is organized according to levels of learning and which includes behavioral objectives.

Children proceed through the levels at their rate of learning. Learning centers are in each kindergarten and are used for independent investigation and for small group instruction in math, language, or science.

- High ratio of adults to children. This is made possible by using undergraduate students of early childhood education from the U. of Missouri. Also, high school students enrolled in a child care and development course spend time observing and interacting with the young child. An annual areawide conference for teachers of private preschool programs, Head Start classes, and kindergarten and primary teachers is cosponsored by the school district and the U. of Missouri.

Just around the corner, says Miss Stumpe, is an expansion of the individual approach into the primary grades, with cooperative teaching between kindergarten and early primary teachers. Also planned is a program to work with prekindergarten children and their parents outside the formal school program, such as a Saturday school or home tutoring. Because of the individualized learning program in the kindergarten, the school district has found it necessary to extend the nongraded approach into the primary years in order to maintain the initial gains made in kindergarten.

## Fairfax County Starts from Scratch

Unlike Ferguson-Florissant, many school districts face the problem of beginning a kindergarten program from scratch, or perhaps expanding it districtwide from a pilot project. The experience of Fairfax County, Va., illustrates the need for a tremendous amount of planning time and the involvement of all affected personnel.

The inauguration of kindergartens in the county in 1968-69--for 8,100 pupils--was the largest single program addition in the history of the system. Three years before the program was initiated in full, the school board had considered including kindergarten rooms in its 1965 school building bond referendum, but the extra cost, estimated at \$4-5 million, caused the school board to defer consideration for the time being.

As local and statewide interest in kindergarten increased the following year, the superintendent appointed a staff study task force, which eventually involved 75 educators. The task force looked into curriculum, organization, facilities, personnel, demonstration classes, inservice education, and finance. In April of 1966 the target date of September 1968 was established for inaugurating a countywide kindergarten program.

During this period, the school board directed that priority attention be given to elementary school construction, including spaces for kindergarten. The 18 new schools in the system, built since 1967, have kindergarten spaces. In existing schools, space was carved out or temporary rooms were added. Establishment in 1967 of a Title III center (The Center for Effecting Educational Change) greatly helped the kindergarten effort. It was then incorporated into a longer project for early childhood education. One of the Center's main projects was to do the planning necessary to get the kindergarten program off the ground and to field test a number of critical factors.

Seven demonstration centers located in different parts of the county opened in September 1967. Five-year-olds who participated were selected on a first-come, first-served basis. The pilot program included curriculum development, establishing management routines, trial use of paraprofessionals, testing of learning materials, and development of home-school relationships. When the kindergartens opened on time in 1968, they used a wide and varied curriculum, had worked out the kinks of countywide classes--2 1/2 to 3 1/2 hours in length, two groups a day, a pupil-teacher ratio of 25 to 1 with each class staffed by a full-time teacher and a teacher aide, development of a recommended list of learning materials, and a reporting system to parents.

What were the major obstacles? Despite the early planning, time became a major problem. Original funding estimates were not met, and the full staff of six central office personnel was cut in half; the planners also failed to anticipate a bind between state and federal funding curtailments. Some of the demonstration project teachers were ineffective because of the lack of training. Planners in the Fairfax experience also recommend that teachers should help with the selection and evaluation of materials, intensive preservice and inservice programs should be scheduled to deal with instructional materials for kindergarten teachers and aides, and evaluation instruments should be developed locally to assess the instructional materials.

## **Stamford's Early Learning Center**

In quonset huts, church basements, temporary classrooms, converted hallways, or, luckily, regular classrooms within a school building--the facilities for early education programs have been varied, and often inadequate.

The Educational Facilities Laboratories (EFL), in an attempt to encourage original, appropriate, and stimulating environments for younger children, granted planning money to a Montessori school in Stamford, Conn., for a new school. The result, the Early Learning Center, opened in 1967 and has since earned a reputation as an outstanding example of facilities for early childhood education. The basic point, a 4,000-square foot, one-story schoolhouse, was built with modular units and cost only \$14 a square foot exclusive of site preparation. It is designed for children between the ages of 2 and 8 and is "at once free, open, warm, and intensively planned."

According to a description by EFL: "In a very real sense, adults are merely tolerated in the school, not only by the children, but also by the building itself. In fact, everything about the school--its quality, its air of pleasant utility, its concern for art and good taste--is shaped to assure its young occupants that their teachers, and the environment in which they spend three to five hours a day, five days a week, respect them as rational, social, inquisitive individuals. One of the Early Learning Center's fundamental concepts holds that education, or more precisely, the acquisition of knowledge, takes place anywhere, everywhere, at any time...."

Scale is important. Storage is primarily on open shelving--low board ledges laid on concrete blocks--strong enough for children to play on, easily dismounted. The shelves also serve as room dividers, creating little alcoves for specialized activity within the open room. Walls are left free for display and learning space. The "omnidirectional space" of the open room offers quiet corners, busy courtyards, open areas, protected nooks, places for thinking and places for working, and easy access to the outdoors. Furniture is kept at a minimum. Wall-to-wall carpeting deadens noise and encourages children to carry on activities anywhere. The "forum," an 8 by 12-foot sunken area, is a place for conferences and conversation.

A 22-minute, 16mm color film, Room To Learn, shows the Early Learning Center in operation. It is available on free-loan from Association Films, Inc., 600 Madison Ave., New York, N.Y. 10022.

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## **And from Other Local Preschools**

- The Preschool Experience Center of Eagle Point (Oreg.) Public Schools uses the cooperative idea and a staggered schedule. The preschool has classes for 3- to 5-year-olds, divided randomly into two groups. Each group meets two days a week, and Fridays are devoted to 5-year-olds for an intensified readiness program. Parents must agree to assist in the instructional program as aides or agree to attend weekly seminars conducted by leaders from community agencies. One aim of the program is

to improve the skills of parents and introduce them to new career patterns. Overall aim is to have parents and children learn together.

- The Early Childhood Center of the Genesee Valley (N.Y.) School Development Assn. serves as a model for teachers and administrators in a nine-county area. This Title III project coordinates health and educational services for young children from birth to 7 years of age; the children are selected to reflect racial, ethnic, and socioeconomic backgrounds of the area; an ungraded organization is used for the 3- to 5-year-olds in the demonstration class; and parents are encouraged to become involved in the day-to-day operation of the school, e.g., helping with the activities of small children. Special features include folk dancing; violin instruction; daily swimming lessons; movies made by the children; and puppet theater dictated, enacted, and recorded by the children.

The demonstration preschool also serves as a clearinghouse for dissemination and coordination of early education in the area. It has a library of 200 books and other materials and is staffed by parents from the preschool. It conducts meetings, workshops, and seminars on early education for the staff throughout the counties.

- Budgetary considerations forced the Jefferson County Public Schools, Lakewood, Colo., to eliminate their Parent Education and Preschool Program for 4-year-olds. Parents, however, wanted some type of program continued and offered to pay the cost if the school district would sponsor it. Arrangements were made, and during the 1969-70 school year there were 620 4-year-olds meeting twice a week in a preschool program financed by tuition fees. School administrators hope to get the program back into the school budget and expand it to all 3- and 4-year-olds in the district.
- Baltimore, Md., Public Schools, which have had a kindergarten program since 1901, began an Early Admissions Program for 4-year-olds in 1963. Designed primarily for disadvantaged children, the Program gives them structured language development.

Teacher evaluation and test materials indicate broad success with the young children--decided growth in articulation and speech patterns, ability to express ideas effectively, visual and auditory perception, motor development, and understanding of numbers and spatial relationships. The school district is planning an experimental program to test various approaches to early childhood education, involving preschool through second grade.

- Giving young children supportive services, such as health care, stimulates the continuing interest of parents in their children--and in the school itself, educators at Aliquippa, Pa., have learned. Aliquippa's year-round program for 3- and 4-year-olds began as a pilot program in 1964 with funds from the Ford Foundation. Now financed by federal money, the compensatory program is no longer considered "experimental" by the school district, but as necessary. It enrolls all children within a school district's boundary, not just those from disadvantaged backgrounds.

## THE HEAT IS ON IN THE STATES

While the federal government's rhetoric zeros in on early childhood education, its funds fail to keep up with its emphasis. The level of all federal funding for preschool education in 1969 was \$416 million. The 1970 figure was \$408 million. "This is obviously not enough," flatly declares a staff report of the Education Commission of the States (ECS), pointing out that state governments are beginning to feel the pressure from local school administrators and citizens for full funding of kindergartens, and in some places, prekindergarten programs.

This view is echoed by Glen P. Nimnicht, program director of the Far West Laboratory for Educational Research and Development at Berkeley, Calif., who believes that states that aren't adding preschool education will soon feel pressure from parents. He thinks that federal support of Head Start programs will expand in the future and notes that upper-income families already provide their children with early educational experiences. This leaves a large middle group, which he estimates at three-fifths of the youthful population, out in the cold so far as preschool opportunities are concerned, unless the public schools provide them.

Whether a child goes to preschool--usually meaning kindergarten--depends very largely on where he lives. By the close of 1969, 42 states had adopted legislation permitting kindergarten programs, but only seven states mandated them. In 39 states there is some form of state aid available, but "poor" states like Mississippi, Alabama, and West Virginia grant no aid for kindergartens. And current expenditures for public school kindergarten programs range from a low of \$150 to a high of \$800 per pupil.

ECS has expressed continuing concern about early childhood education. A resolution at the 1968 annual meeting urged "the consideration of the establishment of state policy assuring free kindergarten opportunities for every 5-year-old child and provision for inclusion of kindergarten children in computation of state financial aid." In addition, the ECS staff has expressed concern about the professional soundness of franchised day care centers.

States are reacting to demands for preschool funds in various ways. In South Carolina, public sentiment was given a boost by a survey prepared by Moody Associates which linked a state kindergarten system to an overall drive for economic growth for the state. The state's General Assembly passed enabling legislation, but only enough funds for a limited program in the 1969-70 school year. The state agency anticipates a statewide program soon. In Arkansas, the Governor's Council on Early Childhood Development has spearheaded efforts for early education. In two years it obtained: removal of a constitutional restriction on the ages of children eligible for public education, an act to make it permissible for public schools to provide edu-

tional programs for 5-year-olds, funds for demonstration programs, and state minimum standards for nonpublic-school child care facilities.

Disturbed by the lack of coordination of programs for young children and fragmented planning for them, the governor of Massachusetts has established the Governor's Advisory Committee on Child Development. It includes 13 state agency heads or their representatives, 12 representatives of service agencies and professional groups, and 12 parents of children using or needing day care. The Committee will set standards and conduct long-range planning for day care and be the state's agency for the 4-C program.

## New York Is a Step Ahead

In 1966 New York State began the first state-supported prekindergarten program in the history of American education. According to a report submitted in November 1969, approximately four years after the experimental program started: "It began slowly without much fanfare. It has never had much fanfare, and it is now literally bursting at the seams."

Key to the program is an interconnected network of seven demonstration centers in Canton, Great Neck, New Rochelle, Syracuse, Rochester, South Kortright, and Suffolk County. They serve as regional resource centers for publicly and privately supported programs--ranging from prekindergarten to Follow Through projects in primary grades. Fifty school districts were operating prekindergartens for 3- and 4-year-olds in the 1969-70 school year, covering 5,622 children and their families. The average cost of the state experimental prekindergarten program is about \$1,300 per child, but the staff points out that adequate day care costs \$1,800 annually per child, and much more if the program reaches a desirable standard. State support of the prekindergarten program is 85% of the total cost, and greater expansion of the idea has been limited only by the lack of funds.

Inspiration for the program came from the successes of Head Start and the work of Martin Deutsch in New York City with disadvantaged preschoolers. As in these programs, the staff is varied, and includes teachers, assistant teachers, teacher aides, social workers, psychologists, nurse-teachers, and educational directors. In addition to an educational program geared to the whole child, the prekindergartens have stressed expanded health services (65% of health defects discovered in the 1968-69 enrollment, for example, had gone unnoticed by parents); a good nutrition program; adequate psychological services; social services to families; and strong parent involvement. In many evaluations of children in the program, "dramatic changes were apparent." The children showed greater independence, increased ability to solve social problems, increased attention span, improved motor coordination, increased vocabulary, and general emotional adjustment: "Many children, mute, withdrawn, or on the contrary, aggressive and hostile, made strides in learning to trust, respond, and live more harmoniously with others."

The State Education Dept. has asked the legislature for funds to substantially expand the prekindergarten program. And the New York State Board of Regents thinks enough of the results to propose that state prekindergarten programs be available to all 4-year-olds by 1971.

## **Communication in Washington State**

The state of Washington, which enrolls 81% of its 5-year-olds in kindergarten, keeps in touch with local kindergarten programs and keeps them abreast of new developments in a very effective way. The method is a frequent newsletter, Focus on Kindergarten, which is distributed to kindergarten staff throughout the state. The articles in the newsletter are professional in tone, but written in a style that is useful to paraprofessionals as well as to teachers. The topics are far ranging, e.g., pupil assessment in the kindergarten, behavioral observations of young children, oral language development, fostering social and emotional development.

In Washington, the operation of a kindergarten is a matter of discretion with local school boards, but once instituted, the kindergarten program is eligible for state funds.

## **Pennsylvania Emphasizes Early Schooling**

In 1897, Pennsylvania laws provided for the establishment of schools for 3- to 6-year-olds. (This was revoked in the early 1900's, but local efforts continued.) Today, every county provides some kind of kindergarten program, and the goal of the Pennsylvania State Dept. of Public Instruction is to enroll the 27% of the state's 5-year-olds not now covered by kindergarten programs. Two years ago the Department established a Division of Kindergarten and Preschool Services. Its goals: mandatory kindergarten for all children, permissive establishment of nursery schools for any district wanting them, establishment of approved teacher-training programs in early childhood education, and general improvement in the quality of early childhood education in the state. The Division has prepared materials for teachers and has written the first kindergarten guide for the state. The guide emphasizes that "learning is individual and personal and that every child's needs can be met if the proper techniques are used."

Many Pennsylvania schools have experimented with innovative arrangements and curricula. One popular feature is a transition class between kindergarten and first grade to give some young children more time to mature.

## **North Carolina: How To Begin**

North Carolina began its statewide kindergarten program in 1969 with demonstration centers. Although the General Assembly had approved a total kindergarten program, its initial appropriation of \$1 million could cover only a limited start. So the State Board of Education set up demonstration centers in each of the state's eight educational districts. The objectives of the centers will be coordinated with those of the primary grades, and primary and kindergarten teachers will get the same inservice training programs. Representatives of teacher-training institutions participated in workshops for the demonstration center teachers, and many of the institutions are now planning new certification programs for prospective K-3 teachers. The centers are providing comprehensive services--instructional, health, welfare--and involving everyone in a community who can contribute.

## WHAT'S AHEAD ON THE RESEARCH FRONT

HEW's National Center for Educational Research and Development is an umbrella for a myriad of research programs seeking to organize new knowledge in education. For the early childhood years there is one major effort--the National Laboratory for Early Childhood Education, established in 1967. This is a network of seven university-based centers under the leadership of a National Coordination Center at the U. of Illinois. In addition, at least six of the federal government's Regional Educational Laboratories have early childhood developmental programs.

Through its seven centers (one is specifically concerned with handicapped children), the National Laboratory is developing data on the best kind of learning environments for children from birth through 9 years of age. It is emphasizing children's learning and curriculum development; the educational roles for mothers, aides, and other adults; and evaluation techniques.

Among the various reports published by the National Laboratory, three give particularly comprehensive reviews of research. The Early Childhood Selected Bibliographies cover six subjects--language, education, cognition, and physical, social, and personality aspects of early childhood education. Each contains 15 abstracts. Summary statements by early childhood experts are included in An Analysis of Early Childhood Education Research and Development. An historical account of influential research leading to the current interest in early childhood is contained in The Rationale for Early Intervention. (ERIC Clearinghouse, U. of Illinois, Urbana, Ill.)

The seven centers of the National Laboratory are:

Arizona Center for Early Childhood Education, U. of Arizona, College of Education, Tucson, Ariz. 85721

Early Education Research Center, 5801 Kenwood Ave., U. of Chicago, Chicago, Ill. 60637

Research Program in Early Childhood Education, Dept. of Child Development and Family Relationships, Cornell U., Ithaca, N.Y. 14850

Research Center for Early Childhood Education, U. of Kansas, Dept. of Human Development, Lawrence, Kans. 66044

Demonstration and Research Center for Early Education, George Peabody College for Teachers, Nashville, Tenn. 37203

Center for Research and Development in Early Childhood Education, Dept. of Psychology, Syracuse U., Syracuse, N.Y. 13210

Center for Early Education of the Handicapped, U. of Oregon, Eugene, Oreg. 97403.

## The Regional Laboratories

Working with local school districts and state agencies, the regional laboratory system is primarily interested in promoting sound educational ideas into action. At least six of the laboratories are engaged in projects concerned with early education. Some of the highlights:

- A toy library is the product of the Far West Laboratory for Educational Research and Development. The toy-lending library of the lab, designed as a model for any school system, is part of the program of "Education Beginning at Three Years of Age." Each library contains a wide variety of educational toys, games, puzzles, and other learning materials which are displayed within reach of a small child. Each toy is accompanied by two or three pages of illustrated instructions for the parent or teacher on how to use it to develop the child's senses, language skills, or problem-solving abilities. In addition the staff conducts a parent education program of 12 weekly two-hour sessions. Another part of the regional lab emphasis is further research and coordination of the preschool program developed by Glen Nimmicht, which emphasizes education of 3- and 4-year-old children in a limited time (not more than three hours a day) and in a child-centered environment where they are stimulated toward greater learning by their surroundings. (For more information write to the Laboratory, Claremont Hotel, 1 Garden Circle, Berkeley, Calif. 94705.)
- After studying local needs, the Appalachia Educational Laboratory decided that its area needed a preschool program that did not require large numbers of qualified preschool teachers, did not involve transporting many very young children, did not require a great deal of classroom construction, and was inexpensive. The result was home-oriented preschool education, which is costing approximately one-half that of conventional kindergartens. It is designed for 3- to 5-year-old children and works best when conducted cooperatively by a group of school systems. The program consists of a 30-minute daily TV lesson received in the home; a weekly home visit by para-professionals to counsel with parents and children; and group instruction provided once each week in a mobile classroom parked near the home for convenience to parents and small children. Testing has shown that children taking part in this early childhood program gain 36% in general learning over a control group of children. (Appalachia Educational Laboratory, 1031 Quarrier St., P.O. Box 1348, Charleston, W. Va. 25325.)
- The Early Childhood Education Program of the Southwest Educational Development Laboratory is working with four types of disadvantaged children, ages 2 to 5. It has developed instructional materials for deprived rural children, for disadvantaged urban children, for Spanish-speaking children in the inner city, and for Spanish-speaking children of migrant farm workers. A special feature of the Spanish-speaking programs is teaching the children, first, in Spanish, with lessons in English used later to reinforce the same concepts. The lab also has developed a test to assess young children's proficiency in English. (Southwest Educational Development Laboratory, 800 Brazos St., Austin, Texas 78767.)
- The first-year communications skills program of the Southwest Regional Laboratory for Educational Research and Development (11300 La Cienega

Bld., Ingelwood, Calif. 90304) is designed to teach kindergarten children the mastery of 100 words. The program also develops ability to read and comprehend nonprogram words composed of sounds taught in the classroom.

- The Center for Urban Education has developed instructional profiles, including sample lesson topics, techniques, and content for a year's work for teachers working with urban children. Another project trains language "nurses," who stimulate language development with groups of children on an individual basis. The nurses also work with mothers to help them become aware of the importance of language development. In the dissemination field, the laboratory has a Program Reference Service which identifies, examines, and provides information on outstanding programs in grades K-6 which deal with the problems of urban school systems. (The Center for Urban Education, 105 Madison Ave., New York, N.Y. 10016.)
- The Early Childhood Education Study of the Education Development Center (56 Chapel St., Newton, Mass. 02160) is based on the idea that teachers should help design the classrooms in which they teach and the materials they use. The Center serves as a meeting place for other professionals, teachers, and parents to discuss educational problems and create materials.

### **Head Start's Planned Variation Studies**

The Head Start staff has also embarked upon a long-range research project, coordinated by Stanford U., to determine the most effective way to teach low-income children. Known as Planned Variation, the pilot program selected eight methods of teaching disadvantaged young children, many of them described earlier in this report, and will follow the children through the third grade. It will be expanded to include other models as more research funds become available. The initial projects:

U. of Kansas: A behavior analysis approach. The goal of the program is to teach the child needed skills by means of systematic reinforcement procedures. The teacher's role is that of a behavior modifier. Individual instruction is emphasized through the use of programmed materials. Parents are hired and trained to use the reinforcement techniques in the classroom and to teach them to other parents. (Donald Bushnell Jr., Dept. of Human Development, U. of Kansas, Lawrence, Kans.)

U. of Illinois: A structured academic approach. The program is based on the belief that every child can achieve well in the academic area if he receives adequate instruction and if there is a payoff for learning. Programmed materials are used to teach essential concepts in reading, arithmetic, and language. A language training program is specifically designed to remedy language deficiency. Teachers reinforce those behaviors that are desired. Parents are trained as teacher aides. (Wesley Becker and Siegfried Engelmann, Bureau of Educational Research, U. of Illinois, Urbana, Ill.)

Bank Street College: A developmental approach. The ultimate objective is to enable each child to become deeply involved and self-directed in his learning. Activities are planned for both individual and groups of children, and the classroom is considered a workroom where the child is free to inves-

tigate objects and explore media. Concrete, sensory, and motor activities are interrelated with opportunities for functional and expressive use of language. Key elements in the program are staff development, parent involvement, and community relations. (Mrs. Elizabeth Gilkeson, Director of Children's Programs, Bank Street College of Education, New York, N.Y.)

U. of Arizona: An emphasis upon the development of behavioral skills and attitudes. While carefully structured, the curriculum is flexible and the organization of the class provides for frequent opportunities for small group and one-to-one, adult-child interaction. The child is provided with a variety of opportunities to develop individual skills at an individual rate. The assumptions are made that when opportunities for learning are made available, the child does not have to be forced, or even to be requested to learn; and that good results from the instructional program are very dependent upon an effective parent involvement program. (Ronald Henderson, Research and Development Center, Early Childhood Education Laboratory, U. of Arizona, Tucson, Ariz.)

Ypsilanti Public Schools: A preschool program derived from the theories of Piaget. Materials are presented in a sequential fashion from the simple to the complex and from the concrete to the abstract. The program has three parts--the curriculum, which is cognitively oriented; the teacher, who participates actively in developing class programs; and the home, where the teacher works with the mother to promote cognitive growth in the child. (David Weikart, Director of Special Education, Ypsilanti Public Schools, Ypsilanti, Mich.)

Far West Laboratory for Educational Research and Development: A responsive environment program based on the self-discovery approach. The program aims to help children develop both a positive self-image and intellectual ability. The learning activities are intended to be self-rewarding, not dependent on external rewards or punishments. The total environment is organized around the child's interest and his style of learning. (Glen Nimmicht, Program Director, Far West Laboratory for Educational Research and Development, Berkeley, Calif.)

Education Development Center: An action-oriented approach. The classroom environments are fashioned to be responsive to the individual needs of children as well as to the talents and styles of the teachers. Outside advisers are used in each classroom. Class activities arise from the needs and interests of the group rather than from a prescribed curriculum. The teacher serves as a catalytic agent, and there is a continuing program of parental involvement and interpretation. (David Armington, Education Development Center, Newton, Mass.)

U. of Florida: Utilizes the concept of the parent-educator. This is a person from the local community who works with each parent in the home by presenting weekly tasks, individualized for the child, to develop his intellectual and cognitive skills. The parent-educator also assists in the classroom. The mother learns that education occurs in the home, what kinds of child activities she should encourage, and that her behavior with her child can have an effect and be successful. (Ira Gordon, Institute for Development of Human Resources, College of Education, U. of Florida, Gainesville, Fla.)

## **EDUCATION FROM THE BOTTOM UP**

With mounting research, a cluster of experimental programs that have proved their worth, acceptance of the paraprofessional, emphasis on early prevention of learning blocks rather than "cures" that can come too late, increasing business interest, and parental demand for preschool programs, what is the future for early education? Absolutely unlimited. Except by funds.

Appropriation requests from the Administration continue to emphasize experimental programs for early learning, but Congress seems bent on providing early childhood training for all children, not just the disadvantaged.

William P. McClure, director of the Bureau of Educational Research, U. of Illinois, has defined some priorities to be considered in plans for future financing of early childhood education. They include:

- Special programs for children with disabilities, to include all needy children.
- Universal programs for all children as an integral part of the public elementary schools. Nursery school education should be overhauled and organized as part of the public school system. The traditional break between kindergarten and first grade will likely disappear.
- Home-school programs extended to all parents. Involvement of parents in the school program is essential. Instead of having two sessions of preschool each day, a teacher "may be far more effective if half of her day is spent working with parents and with individual pupils."
- Expanded day care, with personnel trained to direct activities during the "care" part of the day, which would enrich the instructional programs.

The deep changes sweeping early education, it seems clear, are not about to fade away. The ultimate question to be answered is what will happen to the rest of the educational system when early learning programs have accomplished their purposes. Carnegie Corp., in its 1969 annual report on early education, put it bluntly: "It seems clear that the schools must be changed in order to accommodate the abilities of the children who enter them--which sounds like a truism, except that much current thinking seems to hold that the purpose of early childhood education is simply to prepare children to do well in the schools as they are now organized and managed."

The more logical but infinitely more difficult goal, said the report, "is to build education from the bottom up, and that is a far different thing."

## FOR MORE INFORMATION

American Association of Elementary-Kindergarten-Nursery Educators, 1201 Sixteenth St., N.W., Washington, D.C. 20036

Association for Childhood Education International, 3615 Wisconsin Ave. N.W., Washington, D.C. 20016

Association for Supervision and Curriculum Development, 1201 Sixteenth St., N.W., Washington, D.C. 20036

Association of Classroom Teachers, 1201 Sixteenth St., N.W., Washington, D.C. 20036

Bureau of Elementary and Secondary Education, U.S. Office of Education, FOB 6, 400 Maryland Ave., S.W., Washington, D.C. 20202

Day Care and Child Development Council of America, Inc., 1426 H St., N.W., Washington, D.C. 20005

National Association for the Education of Young Children, 1834 Connecticut Ave., N.W., Washington, D.C. 20009

National Association of Elementary School Principals, 1201 Sixteenth St., N.W., Washington, D.C. 20036

National Association of Independent Schools, Inc., 4 Liberty Square, Boston, Mass. 02109

Office of Child Development, U.S. Department of Health, Education, and Welfare, P.O. Box 1132, Washington, D.C. 20013

Office of Economic Opportunity, 1200 Nineteenth Street, N.W., Washington, D.C. 20505

ERIC

Educational Resources Information Center (ERIC), the national network for education, is an activity of the National Center for Educational Communication of the U.S. Office of Education. Research reports, descriptions of exemplary practices, and other documents are announced in ERIC's abstract journal, Research in Education, and can be obtained in microfiche or hardcopy from the ERIC Document Reproduction Service, National Cash Register Co., 4936 Fairmont Ave., Bethesda, Md. 20014.

## **OTHER REPORTS BY THE EDITORS OF EDUCATION U.S.A.**

AASA Convention Reporter. Highlights of the 1970 Annual Convention of the American Association of School Administrators, Atlantic City, New Jersey, February 14-18. #411-12750. 24 pp. \$1.50.

The Big Talent Hunt. How leading districts recruit teachers, as told by recruiters and placement officers. #411-12446. 1969. 32 pp. \$5.

Black Studies in Schools. A roundup of successful programs and policies across the nation--what school systems are doing about black and other ethnic studies programs. #411-12746. 1970. 48 pp. \$4.

Differentiated Staffing: A Review of Current Policies and Programs. Tells how some schools are using this new way of employing and paying teachers and whether it works. #411-12754. 1970. 32 pp. \$4.

High School Student Unrest. Tells school administrators how to anticipate protest, channel activism, and protect student rights. Tells where and why high school students are protesting. #411-12744. 1969. 48 pp. \$4.

Individually Prescribed Instruction. Answers such questions as: What is IPI? How is it working in experimental elementary schools? How does it differ from the traditional school? What changes are necessary to introduce IPI into a traditional school? #411-12420. 1968. 32 pp. \$3.

NAESP Convention Reporter. Highlights of the 1970 Annual Meeting of the National Association of Elementary School Principals, Philadelphia, Pa., April 18-22. #411-12752. 24 pp. \$2.

NASSP Convention Reporter. Highlights of the 54th Annual Meeting of the National Association of Secondary School Principals, Washington, D.C., February 7-11, 1970. #411-12748. 24 pp. \$2.

Reading Crisis: The Problem and Suggested Solutions. A roundup of the most significant recent discoveries on reading problems and a guide to supervisory and teaching techniques that work. #411-12766. 56 pp. \$4.

Sex Education in Schools. A review of current policies and programs for the guidance of school personnel and parents. #411-12732. 1969. 48 pp. \$3.

The Shape of Education for 1970-71. Twelve articles in concise understandable language highlight significant new developments that have surfaced as major educational issues. A handy reliable sourcebook for speech and news writers on what's new in education. #411-12760. 1970. 64 pp. \$3.

Urban School Crisis: The Problem and Solutions Proposed by the Urban Education Task Force of HEW. A blueprint of the extraordinary deficiencies in our urban school system with a clear guide for correcting them. Reproduced from the Congressional Record. #411-12756. 1970. 64 pp. \$4.

Address communication and make checks payable to National School Public Relations Association, 1201 16th Street, N.W., Washington, D.C. 20036